

# MARINE RECORD

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## AMERICAN ENTERPRISE.

The British Consul, Mr. Wyndham, in his annual report on the commerce of Chicago and district for the year 1900, brings out in clear relief the enterprise and alertness of the Chicago manufacturer, who, he says, had a prosperous year, and is endeavoring to obtain a larger share of the world's trade: "Owing to the high tariff he has a great advantage in his home market, but he is showing that he can compete with his European and American adversary on equal terms in any part of the world. He is not only making great strides in commerce in South Africa and the British colonies, but he is also looking for more trade even in Great Britain. He is continually changing his methods and machinery, and will remorselessly cast aside a nearly new machine if a new invention does the work better or more economically. The product at most factories is continually improving, and will soon be able to compare in quality as well as in price. While the tendency in retail business in Chicago seems to be toward large general stores, where everything is sold, the manufacturer finds it more profitable to specialize both in his product and in the work of the men. In comparing American with British machinery, the rough casting of the former compare unfavorably to the eye with the high finish in all parts of the latter, but where perfection is necessary in the working parts the American machinery could not be better finished. A great saving is thus made in the manufacturing, no unnecessary time nor expense being laid out on finish simply for show. The Chicago merchant leaves nothing undone that can benefit his trade, and sends or goes himself to any country where he thinks there is an opening, and advertises largely. He will also make experiments with any machine or method which is brought to his notice and which he thinks may be an improvement, and he will investigate, try, and, if it is satisfactory, adopt it, while his European and even his Eastern States rival is making preliminary investigations. The retail merchant makes a clearance at least twice a year at whatever sacrifice is necessary, and in this way does not carry over to another year goods that will be out of fashion and deteriorate, causing bigger loss than the cut in price at the end of the season. In the big retail stores the buyers are very good judges of the probable trade, and buy very close to the demand, and in some cases under rather than over buy. It is impossible to recommend any new imports at this time to the British merchants who are engaged in supplying wholesale merchants or who have a representative here, but it seems most important to point out the growing manufactures with which they will have to compete in the world's markets, many of which they have for years controlled. Merchants, manufacturers, and labor leaders would find themselves repaid by visiting the States, especially this great centre, and studying the conditions and demands, draw their own conclusions as to the steps to be taken to benefit their trade. One of the great faults found is the slow delivery of British goods.

"THE question of fatigue caused to the eyes by various kinds of artificial lights, has recently been taken up and studied at some length by a Russian government expert," says Electricity. He says that the involuntary closing of the eye (winking) is a sign of weariness. Using surfaces illuminated by various lights he counted the involuntary movements of the eyelid, his results being that when candle light was used the eyes were closed 6.8 times a minute; with gaslight winking occurred 2.8 times a minute; with sunlight, the eyes closed 2.2 times, and with electric light 1.8 times. From these facts he draws the conclusion, which seems to be corroborated by other observations, that the electric light is the least injurious to the eyesight of all varieties of artificial illuminants.

## UNDER ICE TO THE POLE.

At a recent meeting of the Vienna Geographical Society, Herr Kampe outlined his plan to reach the North Pole in a submarine boat, now being built at Wilhelmshaven.

The boat will be ellipsoid in form, with a major axis of 70 feet, a breadth of 26 feet and displacement of 800 tons. The boat will hold sufficient air to last five persons 15 hours, the carbonic acid gas being removed by a combination with caustic soda. She will have both horizontal and vertical screw propellers, the latter for raising and depressing the vessel. The fuel will be petroleum, of which 150 tons will be carried. This amount is calculated to be more than five times what is necessary for a trip from Spitzbergen to the Pole and back.

In the 15 hours during which the boat will be able to stay under water she can cover 50 miles. She will be submerged at the edge of the land of ice surrounding Spitzbergen and will be steered toward the nearest open water to the north.

Herr Kampe does not think that the ice pack is of greater depth than 20 feet, and the boat can descend 160 feet. If, after six hours, no opening in the ice can be discovered, the boat will return to the last opening, but if the pack is thin, attempts will be made to blast and open it.

Herr Kampe does not think that the ice pack continues unbroken in any direction for more than five miles.

## RULES OF THE ROAD.

Judge Hazel, of Buffalo has handed down an interlocutory decree in the case of the steamer Sir William Siemens and consort Alexander Holley against the steamer North Star, which was recently tried before him.

This libel case grew out of a collision which occurred in St. Mary's river in 1899, and the Bessemer Steel Co., owners of the Siemens and Holley, place the amount of damage done at \$30,342. The decree places the responsibility for the collision upon the North Star, owned by the Northern Steamship Co.

It took two weeks to try this case before Judge Hazel and there was a good deal of wrangling. There are special rules for the navigation of St. Mary's river, and the Bessemer people claimed these rules had been violated or the collision would have not occurred. The defence claimed that in a general way the navigation laws of the Great Lakes had been obeyed by the North Star.

Judge Hazel decided that St. Mary's river rules applied to St. Mary's river and therefore issued the decree. The Bessemer Co. will have to prove the amount of damages sustained before they can collect from the Northern Steamship Co. Harvey D. Goulder, of Cleveland and George Clinton, of Buffalo were attorneys for the libellant, and were opposed by John C. Shaw, of Detroit and Brundage & Dudley of Buffalo.

## TO LEAD US INTO DANGER.

In a letter to Capt. George P. MacKay, treasurer and chairman of the Committee on Aids to Navigation, of the Lake Carriers' Association, Commander J. C. Wilson, U. S. N., Inspector of the Eleventh Light-House District, says:

"Referring to the characteristic of the fog signal at Detour light-station, I am informed by the keeper of that station that frequently vessels lie for hours in calm weather in a streak of thick fog, when it can be seen from the station that the weather is perfectly clear up the river. The keeper suggests using a special signal, such as three long blasts, to indicate this fact, so that vessels approaching the river may take advantage of it if they deem it desirable. This suggestion strikes me as being a good one, but before adopting it I would be glad to have the opinion of vesselmen on the subject."

## WORKING FORCE OF THE STEEL CORPORATION.

The first meeting of the directors of the United States Steel corporation was held at the principal offices in New York, on Tuesday. A formal ratification of the officers made public a week ago took place, and in addition announcement is made of subordinate officers as follows: President, Charles M. Schwab, president of the Carnegie Co.; first vice-president, James Gayley, also of the Carnegie Co.; second vice-president, W. R. Walker, metallurgical engineer of the American Steel & Wire Co.; third vice-president, W. R. Palmer, president of the American Steel & Wire Co.; treasurer, Arthur T. Luke, and secretary, Richard Trimble, secretary of the Federal Steel Co. Judge E. H. Gary, of the Federal Steel Co., is chairman of the executive committee, and Robert Bacon, of J. P. Morgan & Co., of the finance committee.

The policy of the corporation is announced to leave each constituent company with its own set of officers, but all subject to supervision from the corporation's office in New York. The first vice-president will have charge of the mines and wharves of all the companies; the second vice-president will superintend economical operations and the third vice-president will have charge of sales.

## MARINE INSURANCE ON THE ST. LAWRENCE.

A memorial addressed to the Canadian Government by the Montreal shipping interest deals as follows with marine insurance:

"The insurance rate on cargo carried by vessels on the Canadian route is largely in excess of what it should be, and as compared with rates on cargo shipped from ports in the United States is about two to five times as great, according to the season of the year. If the condition of the St. Lawrence navigation is not improved to a very great extent and modernized, and if these improvements are not taken in hand immediately, the result, as far as Canadian trade is concerned, will be the removal from the St. Lawrence route of a great deal of our shipping. Shipping trade to Montreal is very largely owned in Great Britain, and the owners will not continue to send their steamers to Quebec or Montreal if it pays better to send them to ports in the United States, as, in fact, it does now."

THE president of the Newport News Ship Building Co., which will build the Charleston, to replace the cruiser of that name wrecked in the Philippines, speaking of the great prosperity of the shipbuilding industry, said: "The total ships under construction in our yards will represent a cost of nearly \$28,000,000, when completed. About one-third of this is merchant work, and the other two-thirds are for the Government. The Korea, building for the Pacific Mail Co., which was recently successfully launched, is the largest merchant vessel ever constructed in this country. Her sister ship, the Siberia, should be ready for launching in about two months. The ships we now have under construction are the battleships Illinois and Missouri, one sheathed battleship, two armored cruisers, one protected cruiser and the monitor, Arkansas. In addition to the two Pacific mail steamers, we are building four steamers for the Morgan line. We are now employing 6,800 men, and before many days we shall have 7,000 on the rolls."

A NUMBER of capitalists at Cadiz, Spain, recently held a meeting and decided to re-organize and materially to increase the shipbuilding works there. The opinion was expressed that not the least of Spain's naval misfortunes in the past has been the inadequacy of her home plants for ship-construction.





## BUFFALO.

### *Special Correspondence to the Marine Record.*

Dredging and a good deal of it is a requirement here at once and the city council is looked to to take the matter in hand.

The rates on package freight (general cargo) are to be well maintained this season, at least, such is the present understanding.

The Maytham Towing & Wrecking Co. is out of business all but the final winding up in turning affairs over to the Union Towing Co., Cleveland.

The opening rate on lumber from Menominee and Marinette to Buffalo is expected to be \$1.62½. Last year the opening rate was \$2, and at the close \$1.75.

This city has now three fire boats named the Hutchinson, Potter and W. S. Grattan, the latter being new and of the latest and best model as well as equipment.

The staff of Maj. Symons, Corps of Engineers, U. S. A., in charge of this district, is getting ready for the work that will be done on the harbor improvements this summer. It is estimated that the work to be done this season will cost about \$1,000,000.

The Buffalo Board of Aldermen have voted in favor of a recommendation that the Legislature be petitioned to allow Buffalo to issue \$400,000 worth of bonds, that the Blackwell canal and Buffalo river may be deepened to 22 feet in the mud and twenty-three feet in the rock.

The barge Iron City, towed up from Tonawanda by the tug A. A. Bellinger, was the first boat to enter the port of Buffalo this season. When she came into the harbor she was greeted by a tooting of whistles. The Iron City will bend a new set of sails before going up the lakes.

There is no great rush for discharging grain cargoes this week and several vessels are still holding their winter storage, but with the first few boats down from Chicago no doubt everything will be smartly cleaned up. Everyone seems to be eager for the spring work to commence.

Coal freights opened at 40 cents anthracite to Lake Michigan ports. The Cleveland organization of vessel owners will have a direct effect on all future charters, as we will have to keep in the swim with Ohio ports and there seems to be a lively enough time ahead in coal shipments.

Capt. M. M. Drake sent a full crew of non-union men to Chicago to fit out the steamer William H. Gratwick of the Drake & Maytham fleet. The crew included master, mates and the engine room force. The men will live on the boat while they are at work, and the former crew will not be hired again.

Wherever the engineers are coming from there seems to be quite a number engaged fitting out boats and they will all displace union engineers, as the backbone of the M. E. B. A. is on the lakes. It is thought that the strike may have more of an ultimate effect on the union than it will have on the Lake Carriers' Association.

The Union Transit Co. having sold the steamer Fisk, other tonnage is wanted to replace her and probably something may be brought up from the coast. The Northern Steamship Co. secured one of the best boats on the Atlantic coast when they chartered the splendid new passenger steamer Miami for their Lake Superior branch route.

Notification was sent to the Chicago agents of the lines on Wednesday morning to arrange for the unloading of their grain laden boats and forward the cargoes by rail to Buffalo. In this action, as in all questions of a general policy, the lake lines have stood together, and it is safe to say there will be no breaking away from this agreement.

B. F. Cowles is building a tug at his yard, foot of Genesee street. She is 75 feet long, 17½ feet beam, 8 feet draught. The engines are of the fore and aft compound type with cylinders of 12 and 17 inches diameter by 20-inch stroke. She will have an Oldman boiler 11 feet long by 7 feet 6 inches in diameter and will be allowed 170 pounds of steam.

The fueling prices are settled at \$2.75 for Pittsburg lump and \$2.65 for Reynold's Hill. Chartering is still very quiet,

but some cargoes have been placed for anthracite at 40 cents to Lake Michigan. Steamers are not ready to be placed on account of the engineers' strike, and if the disagreement was settled to-day the vessels that are held on account of not getting engineers would not be ready to leave for several days.

The 2,500,000-bushel steel elevator which the Steel Storage & Elevator Construction Co. are building for the Eastern Elevator Co. is nearing completion. It is located on the site of the Eastern Elevator which was destroyed by fire on July 24, last. In the center is a nest of 68 steel bins or tanks with a capacity of 1,000,000 bushels. Alongside of these are ten large tanks with a capacity of 1,500,000 bushels. The tanks are 80 feet high, the marine towers 140 feet high, and the working house 167 feet high. There is a concrete hopper at the bottom of every tank. The two traveling marine legs will have a receiving capacity of 15,000 bushels an hour. The shipping capacity to car or canal boat by two legs is 24,000 bushels per hour. Power and light will be furnished by Niagara electric energy used through 19 motors with a total capacity of 965 horse-power.

Speaking of the engineers' strike, remarks made by a man engaged in the lake business are worth quoting. He said: "The trouble with this strike is, that so many people not directly interested in the controversy are the sufferers. The vesselmen are not worrying. They know that a late opening of navigation means better rates, and they are saving the expense required to maintain their boats in commission. The best seasons, financially, for the boat owners, are those when the opening is delayed until May. More profit is realized in a short season than in a long one. There's only about so much freight to go any way and the short season means no waits for cargoes and no paying of heavy expenses for fuel, help and insurance, while the boats are idle. So the vessel men are easy. On the other hand the dock men, the grain shovelers and freight handlers are idle. Railroad lines like the New York Central and the Erie are sending freight by rail, and, having through lines to Chicago, can continue to do so should the tie-up not be broken."

## CHICAGO.

### *Special Correspondence to The Marine Record.*

The Geo. W. Roby, after changing ports and coming here from Milwaukee, chartered at 1½ cents oats to Buffalo.

Manitowoc is becoming quite a grain shipping port, no less than 29 cargoes are ready to leave and there is more to follow.

Milwaukee tugmen are again at work, wages on small tugs being made the same as on the larger ones. Crews are to be laid off when work is slack.

The underwriters get back \$6,000 on the loss of the City of Louisville. Her late owners purchased the wreck for that sum, ostensibly with the view of a rebuild.

Johnston Bros., Ferrysburg, launched a large tug on Tuesday. She was built for Messrs. Ewig & Sons, of Port Washington. Hull dimensions, 80 x 16 x 8½ ft. Cost, \$15,000.

The Lake Michigan passenger line, par excellence, is the Goodrich Transportation Co., other small fry may make a ripple here and there, now and again, but the old line is the established one.

Mr. Peck, president of the local lodge of lake engineers, is positive that they will win hands down against the owners. He declares that he is well pleased with the situation and that owners must come to their terms before any work will be done.

With the chartered grain fleet out of this port owners seem to think they can take a rest until the engineer strike and other matters now in progress of formation are all perfectly settled. The Cleveland freight pool and insurance as well as some Lake Erie cargo handling charges are yet to be arranged.

The Graham & Morton Line will run a daily schedule between Chicago, St. Joseph and Benton Harbor. The City of Chicago will leave daily except Saturday at 12:30 noon. The Saturday boat leaves at 11:30 p. m. The Soo City will leave for Holland Tuesdays, Thursdays and Saturdays at 7 p. m.

Buoys are being placed in the lake between Chicago harbor and South Chicago by the light-house boat to mark the outer and inner courses along the lake shore. The channel has not been marked out since the spring of 1893, preceding the world's fair, and many of the markers and buoys have been destroyed.

Four boats weekly will continue service between Chicago, Grand Haven and Muskegon by the Goodrich company. In

addition to the special boat out of Chicago Monday morning there will be departures each Tuesday, Thursday and Saturday evening. Returning, the boats leave the Michigan side on Sundays, Wednesdays and Fridays.

An action has been taken by the Seamen's Union seeking to prevent the marine cooks from affiliating with the Federation of Labor. The seamen say that cooks have been affiliated with their order for a quarter of a century, and ought to stay there. They have asked the Federation of Labor to revoke its charter to certain organizations of cooks.

The steamers Tampa and Hadley will be among those sailing this week. Neither boat is enrolled in the Lake Carriers' Association. Their engineers will work on the understanding that they will receive the wages ultimately settled upon at the close of the marine engineers' strike. A number of ships that were due to sail will not leave port until Monday. Owners affect to be indifferent about their going, and the striking engineers claim that men cannot be secured for the engine rooms.

Vessels that have been holding grain for winter storage and spring delivery are being towed to elevators to discharge. Corn is worth more in the elevators than in transit, though about a dozen cargoes will get away this week. The Canada-Atlantic line starts on the season work Thursday, and the Rutland line on Saturday. These boats have full crews.

Chicago tugs are cutting into the Milwaukee business and towing vessels from that port to load here. As the United Tug Co., (towing syndicate) can command an unlimited supply of steam and there is no law to prevent Chicago tugs from working at Milwaukee shipping is not likely to be much delayed at the latter port on account of the tugboat engineers strike.

The steamer Gordon Campbell left this port under her own steam with a load of 86,050 bushels of oats from Lasier-Hooper, to be delivered to the Grand Trunk railroad at Sarnia. The boat is owned by Miles E. Barry, and has non-union engineers. The Barry Bros., of which there are several, are pilots, engineers, managers, owners or anything that comes before them, they are not being dictated to by anyone either.

The local branch of the engineers' union, at a special meeting, endorsed the action of the national officers in the present strike and resolved to stand by President Uhler. The union resolved not to go to work until such a time as the lake carriers would consider its scale of wages and meet the union representatives in a conference. A large number of the engineers on tug boats have been taken into the union and on account of the current through the opening of the drainage canal no vessels can now be handled in Chicago river without the aid of tugs.

## DETROIT.

### *Special Correspondence to The Marine Record.*

The new steamer David M. Whitney, built by the Detroit Ship Building Co., is now about ready to turn over to her owners.

The Straits of Mackinac is now entirely clear of ice. The Gordon Campbell and Mary Boyce passed down on Wednesday.

The favorite steamer Frank E. Kirby is again in service with every indication of having a prosperous and paying season before her.

Although the Pentland came through the Straits several days ago she is still at Harbor Beach waiting for a slant to get to Port Huron.

The Toledo tugmen didn't like the Cleveland tugs doing their work so they declared the sympathetic strike off and took up their employment again this week.

Capt. Henry B. Lothrop's boat-house was burned a few days ago with a loss of about \$15,000; insurance \$6,000. A steam yacht, naphtha launch and sail boat were destroyed.

The steel towbarge A. W. Thompson was successfully launched from the West Bay City yard of the American Ship Building Co. since my last report. Her carrying capacity is 6,000 tons of iron ore.

The marine engineers are loyal to their union and stick to the craft management and business tact of Geo. Uhler, their president. The Detroit lodge contains some excellent members and their views, no doubt, bear great weight with their national presiding officer.

After holding a conference with President Uhler, of the Marine Engineers' Beneficial Association, the local unions issued a statement in which they deny that the great object of the engineers is to disrupt the Lake Carriers' Association. They claim they simply want the members of the Association to use their influence with the Executive Committee to have the demands of the engineers granted. They claim that if



this is not done the owners must leave the Association, as there is no use of the owners giving the engineers what they ask and at the same time attempting to live up to the classification of the carriers.

The C., H. & D. road has entered into a contract with the MacDonald Engineering Co., of Chicago, for the erection of a steel fire-proof elevator at Toledo, on the site of the old elevator, East Toledo. The house will have capacity of 1,500,000 bushels, and will be built in two sections, the first of which will be completed to handle the coming crop. The contractor is now putting in the foundations.

The ice jam this week in St. Clair river lowered the water about 2½ feet at the foot of Woodward Ave. The Grand Trunk R. R. car-ferry Huron found something harder than her own bottom on account of the shoal water and was beached barely in time to save an express train and the hull sinking in deep water while crossing the river. A survey in dry dock will show the amount of damage, when repairs will be made and she will be returned to her regular service.

The White Star Line has made the following appointments for the coming season: Steamer Tashmoo, captain, B. S. Baker; chief engineer, Winfield Dubois; purser, A. H. Cramer; steward, W. N. Newhardt. City of Toledo, captain, A. H. Fitts; chief engineer, John Westrick; purser, T. D. Whelan; steward, Chas. Champness. Greyhound, captain, John Stover; chief engineer, George Biddolph; purser, J. H. Henderson; steward, J. H. Sherwood. Idlewild, captain, Joseph Lockeridge; chief engineer, David Maxwell; purser, C. B. Percy; steward, Wm. O'Brien.

The Arnold Line steamer Iroquois now building at the yards of the Craig Ship Building Co. Toledo will be placed on the Sault Ste Marie—Petoskey route. The Iroquois, will cost about \$165,000 and will, like the Chippewa, be a fast freight and passenger carrier of the medium size. Her length over all is 216 feet, a little more than the Chippewa. She has 34 feet beam and a molded depth of 12 feet. She will carry four Roberts' water tube boilers and her engines are designed to make easily 18 miles an hour. She will be ready for service when the season has well opened.

George N. Skinner, dealer in salt, Majestic Building, has organized the Michigan & Ohio Transportation Co. with a capital of \$50,000, for the purpose of owning and managing a line of steamers on the Great Lakes for the salt and general carrying trade. Mr. Skinner's associates in the new company are, Edward E. Rude, Francis E. McCarthy, John A. Russell, and Henry N. Breboort. The company has looked over several 500 and 600-ton steamers which are for sale this spring. If the business proves all that is hoped, the company will build new boats for its trade later on.

Capt. James Davidson, of West Bay City, has two sons, both highly educated and trained shipbuilders. A dry dock plant has recently been added to the Michigan shipyard but it is not unlikely that the millionaire pater will establish his juniors in a modern steel shipbuilding plant. A location between Cleveland and Buffalo has been talked of and now Erie, Pa., is being mentioned. It is likely though that Capt. Davidson will use up some more of the immense quantity of timber that he owns before beginning work on the new yard, also, that all preliminaries will be fully arranged before he does start to expend the \$1,000,000.

The proposed pool for handling vessels if well managed, will probably save thousand of dollars' worth of time for the owners by assigning boats and loads through a chartering bureau, the owners agreeing not to handle any business not placed with that bureau. The rates now discussed and which will probably be adopted are: For ore from the head of the lakes to Lake Erie ports west of Cleveland, 90 cents; from Marquette, 80 cents; from Escanaba, 70 cents; coal, 50 cents. Messrs. Alex. McVittie and B. W. Parker are members of the general committee and will attend the meeting for final perfecting of the organization at Cleveland this week.

Talk about a favorable season for regular line passenger and excursion steamers is now past the talking stage, as for instance, the White Star Line steamer Tashmoo has not a single open date for excursion parties during the coming season. The big steamer is to go into commission June 2, when she will be put in shape to beat the C. & B. steamer City of Erie down on Lake Erie. Her first business trip will be made June 13. A few days ago Mr. Bielman secured a concession from the General Passenger Agents at their meeting in Toronto, allowing a return to the old two and three day time limit for Canadian excursionists. This will mean more business out of Sarnia for Detroit. Under last year's rules of the Canadian Association only one day was allowed on excursions, forcing the steamer line to do away with any but local excursions.

## DULUTH-SUPERIOR.

### Special Correspondence to the Marine Record.

The opening rate on lumber appears to have settled at \$2.50 per M. feet to Ohio ports, nothing higher has been mentioned recently, and some cargoes were placed at \$2.25, but these were on shipper's private terms.

The president of the Tugmen's Association says that any engineer not belonging to the M. E. B. A., is at liberty to go to work on tugs at the head of the lakes, all other ports are at work except Duluth and Buffalo, and they may be in line by the time you come from press.

This is the time when a fellow belonging to the Licensed Tugmen's Protective Association and also to the Marine Engineers Beneficial Association is guessing which set of obligations he ought to hold down to keep the pot boiling. Of course those who have a "shot in the locker" needn't work if they don't want to, but it is different with a man who is trying to do his whole duty with others depending on his earning, and little or nothing at his back. It's a hard old kick to kick against the filthy lucre and yet obligations must be met.

It is reported here this week that Capt. A. B. Wolvin has been offered the management of the fleet owned by the United States Steel Corporation, consisting of a hundred and a quarter of the largest craft afloat on the lakes, including whaleback model fleet. It is understood that Capt. Wolvin required certain conditions before considering the matter, and as the tonnage will want a general office at Cleveland, it is not likely that Capt. Wolvin would shoulder anything more than the local management or agency at this end of the route.

Being satisfied that the break in the concrete elevator at Duluth in December last was due wholly to local causes and not to a defect in the system of construction, the Peavey Grain Co. has given orders for the completion of that plant according to the original plans. Only one-half of the plant as designed had been finished before the break came. This bin has been repaired, and the other concrete cells have been full of grain all winter. When completed, the new elevator will be unique in construction also one of the largest elevators on the continent.

Still the feeling prevails that the local life-saving station should be provided with a telephone, especially so now as there is only one tug company doing business here, and the station is always notified of casualties by the tugs. A telephone is just as much a necessity at the life-saving station as their individual lookout is, and perhaps more so. If the RECORD would make this known in the proper official circles there is little doubt but that the "hello" would be ordered installed forthwith. A telephone means a multitude of observant look-outs, while the look-out at the station only means one pair of eyes with an artificial assistant in the form of night glasses.

While now out of the vessel business on the lakes Capt. Alex. McDougall can see no reason why the engineers' strike could not be settled in short order, the captain believes in conciliatory measures and would deal with the engineers as a body, thus avoiding any future complications, besides, he is of the opinion that the work the engineers are called upon to do, is worth all the wages they get. By the way, the captain's project for whaleback models on the Mississippi, is likely to be given a lively whirl on that river when navigation opens again, the couple of boats already in service have not been given a fair trial yet, but hopes regarding them are high and a large fleet may be built in the near future for river work.

There is nothing to be learned here regarding the engineers' strike, but it seems evident that the owners are gaining ground, as in the first instance all the tugs now belong to leaders of the Lake Carriers' Association, the opposition (Maytham's) having been bought out. Capt. B. B. Inman, who returned from Cleveland a few days ago, says that he thinks the strike will soon be settled amicably. Both sides are represented by hard-headed men—Capt. Corrigan and President Uhler. They are very determined individuals, and there will be no great amount of giving in on either side. Mr. Inman looks for slight mutual concessions, and a better understanding for the future. On the other hand, Capt. Corrigan is chairman of the executive committee only while other owners of large tonnage are quite as firm as he is. Nothing can be learned at this time from Capt. A. B. Wolvin, president of the Lake Carriers' Association, in any case he appears to be unassuming and non-committal since ordering his engineers to report for work. The local boats (except tugs) are all nearly ready for service.

## CLEVELAND.

### Special Correspondence to The Marine Record.

The steamer State of Ohio is now on the Toledo route.

Mr. R. J. Dunham, of Chicago, was among the visitors here this week.

The suggestion was made here this week that a few of the steamers might be temporarily turned into tow-barges until full crews could be shipped.

The recently incorporated Sea & Lake Insurance Co., Geo. L. McCurdy, underwriter, has already a good class of business to start with on its first season.

Coal shippers only want to pay 35 cents to 40 cents per ton to leading ports on Lakes Michigan and Superior, even if it does involve a change of loading port for the vessel.

The C. & B. boats are ready for service and the route will be opened as soon as favorable advices are secured regarding the ice conditions. Nothing has yet been to the westward of Buffalo.

Many engineers would like to join their boats again but they are held back by the union. Everything is satisfactory they say regarding wages and help but they want the union to be recognized.

It is expected that the new railroad carferry steamer for the Pere Marquette system, which is being built here, will be launched May 15. The steamer will probably go into service early in August.

A meeting of the freight pool syndicate of vesselowners will be held in the offices of Capt. Corrigan on Friday, when it is expected that final arrangements will be made for carrying on the season's work.

The Cleveland Leader insists upon having Capt. Wolvin's office at this port. He has built himself a new home and may prefer to remain at Duluth, if so, Mr. Mills will ably represent the corporation at this end of the line.

Owners and brokers are holding for 90, 80 and 70 cents respectively, for Duluth, Marquette and Escanaba iron ore. The discharging rate has been leveled down a cent by the dock managers, now making it 19 cents, 13 cents of which goes to the shovelers.

Soundings taken at the entrance to the port up to the Lake Shore R. R. bridge show a depth of 21 to 22 feet. This is considered the outer harbor limit under federal jurisdiction. The inner harbor is under the general control of the municipality and should be dredged, etc., where needed.

If the engineers' strike lasts for a month or so longer the owners of sail vessels will be able to gather in a few extra ducats. The small steamers and the very large ones appear to be more affected with the class assigned them by the engineers than the medium-sized boats are, and the schooners may reap their harvest if the first-named boats are held back.

A few highly capable steamboat managers are now wanted. The United States Steel Corporation will require a general as well as several local managers, and the United Vessel Owners' interests must also be attended to under the board of directors. The Northern Steamship Co. has already made changes, Mr. Tucker having resigned, and Capt. Murch being apparently disengaged. The latter gentleman stands a first-rate chance of being appointed harbor-master, although the appointment of Captain Peter Lynch has already been announced through the medium of the daily papers.

Messrs. Bartlett & Tinker, forwarding agents and wharfingers, have their warehouses open for receiving freight and are now ready for business. The first steamer of the Lake Superior Transportation Line will leave Cleveland on or about April 25, 1901, taking freight for Sault Ste. Marie, Grand Marais, Munising, Marquette, Dollar Bay, Houghton, Hancock, Ashland, Washburn, Bayfield, Duluth, West Superior and northern points. The first steamer of the Merchants' Montreal Line will leave Cleveland on or about April 26, 1901, taking freight for Toronto, Kingston, Brockville, Prescott, Cornwall, Montreal and eastern Canadian points.

It seems needless to say that shippers don't like the pooling of vessel interests now being brought about at this port, and have so expressed themselves. So far as coal freights are concerned, it ought to work for the best all round. Formerly an agent would place his competitor at a disadvantage by chartering at a slightly lower figure, and so the whip-sawing went on between brokers, owners, shippers and consignees, only to be changed according to the change of port. With a steady rate, all interests, from the mines to the consumers, can figure squarely and above board, also, and of prime importance, is the maintenance of a fair living rate of freight for lake transportation.



## THE LAW OF MAGNETISM.

### A SHORT AND CONCISE LESSON ON MAGNETISM AS IT AFFECTS THE MARINER'S COMPASS.

BY CLARENCE E. LONG, MILWAUKEE.

(Arranged for Masters and Pilots on the Great Lakes.)

#### CHAPTER II.

If a soft iron bar be presented endwise to either pole of a suspended magnet it will attract, though slightly, that pole; and it is indifferent which end of the iron bar is presented. In either case the pole of the magnet "induces" a pole of an opposite character. As before stated, there is always attraction.

The power of inducing magnetism in iron diminishes as the distance increases. When the inducing magnet is slowly removed, the forces exerted by the ends of the iron bar undergo a corresponding diminution; and they cease to exist altogether when the magnet is wholly withdrawn, and the bar returns to its natural or neutral state. Thus the magnetism induced in iron is temporary only.

The foregoing facts enable us to account for the attraction of iron by the magnet, and to reduce the phenomenon to the general principle of the attraction of opposite, and the repulsion of similar poles.

When the pole of a magnet is brought near to a mass of iron, the immediate effect, we have seen, is to render the latter a magnet by induction, an opposite magnetism being developed in part of the mass which is nearest to the acting pole, and a similar magnetism in the part which is most remote. Now, as opposite poles attract one another, while similar poles repel, attraction will ensue between the acting pole and the nearer parts of the iron mass, and the repulsion between the same pole and the remoter parts; and the former of these forces will preponderate, being exerted at a shorter distance. It follows from this that attraction must always result, whichever pole of the magnet be presented to the iron.

Since the magnetism which has been induced in a piece of iron imparts a similar condition to a second piece in its vicinity, and that to a third, and so on, it follows that attraction must ensue between these several pieces, although with diminished energy, as they are more distant from the acting pole; and the first will support a second, the second a third, and so on, if only the weights of the successive pieces be proportionate to the diminished force. A magnetic chain can thus be formed, having two poles. The following experiment illustrates the matter: Let a few pieces of iron rod, or a few soft iron nails be taken. If one of these be placed in contact with the pole of a permanent steel magnet, it is attracted to it and becomes a temporary magnet; it now, in turn, supports a second piece; this, in turn, a third piece, and so on, until a chain of four or five pieces is built up. Each of these pieces of iron is itself a magnet. If it be the north pole of the magnet to which the pieces are attached, the end of the first piece in contact with the steel magnet will have south, and the other end north, magnetism, and this last will develop in the nearest end of the next piece of iron, south magnetism, and so on. But if the steel magnet be removed from the top of the chain, all the rest drop off and are found to be no longer magnetic. A piece of soft iron laid with one end on the end of a magnet practically becomes part of the magnet, simply extending its length, and its further end being of the same polarity as that of the magnet to which it is joined.

#### POLARITY.

The influence that gives directive force to the compass needle, causing it to point to the magnetic north, is called polarity. It is customary to regard the polarity which exists in the north end of the compass needle, red polarity, whence it follows that south, blue polarity, must pervade the regions of the terrestrial north, because it is a law of nature that bodies similarly magnetized will repel, while those dissimilarly magnetized will attract each other.

#### SOFT IRON.

As regards magnetism, is iron which becomes instantly magnetized to its full capacity, when exposed to the influence of any magnetized body, and which loses its magnetism instantly when the influencing body is removed. Now, the earth may be regarded as a huge magnet having the same properties as the natural and artificial magnet and possessing the two poles (north and south polarities), and a neutral line, or magnetic equator. The north magnetic pole of the earth's magnetism was situated, at the time of discovery, in the northwestern extrem-

ity of Hudson Bay, and has been actually reached by man, it being discovered by Sir James Ross, of the English Navy, on June 1, 1881; whilst the other lies to the south of Tasmania, but owing to impenetrable barriers of ice, has not quite been reached, but so nearly that its position was without difficulty ascertained by calculation. The magnetic poles of the earth are not diametrically opposite each other; the north magnetic pole being situated 1200 nautical miles south of the true or geographic pole of the earth, and the south magnetic pole 900 nautical miles north of the true south pole.

Like other magnetic bodies, the two terminal portions of the earth's magnetism are its poles, where the attraction is greatest. Unlike the true, or geographical poles, which are represented by a mere point, the magnetic poles include a considerable area of the earth's surface, amounting perhaps to 50 square miles. They revolve very slowly around the true poles of the earth, but for what reason no one knows, it being due to some unknown law.

THE TRUE OR GEOGRAPHICAL POLES are the extremities of the earth's axis, the two points of 90 degrees north and south from the equator; or where all the meridians of longitude cross or cut one another, or the points where there is no longitude at all or 360 degrees of it, just as you please. These are also the points where there is only one direction; being situated on the true north pole of the earth, you could only look or go in one direction, namely, south; therefore, the direction south must commence at the true north pole of the earth. The conditions would be identically the same to an observer situated on the true south pole of the earth, except the one direction there being north; therefore, the direction north must commence at the true south pole of the earth. An observer situated at either of these two points during the summer season of each, would always have the sun on the meridian, bearing either due north or due south, but if he should take one step from the pole, the above conditions would instantly change, for he would then have all the directions of the compass, and the sun would change its bearing readings, the same as other positions on the earth's surface. The reader of this will probably wonder where the directions east and west commence. These directions, as well as all others, with the exceptions of north and south, have no commencing point; they can start from anywhere.

#### MAGNETIC EQUATOR OF THE EARTH.

Now, as the earth has two magnetic poles, it must also have a magnetic equator. This magnetic equator is a sinuous curve encircling the earth, and crosses the geographical equator in two places nearly diametrically opposite to each other, something after the fashion of the ecliptic. The magnetic equator crosses the earth's equator on the eastern side of the Atlantic, at about the meridian of 11 degrees West, and the other in the Pacific, about longitude 168 degrees West. Its greatest divergence from the true, or earth's equator, is in Brazil. Now, the earth's magnetic equator, acts the same as the equator does of any other magnet. It separates the two polarities of the earth's magnetism from each other. It is a neutral line where there is no vertical force issuing forth. This means that at any place on this line on the earth's surface the dipping needle (to be explained later) rests in a horizontal position.

#### THE DIRECTION OF THE FORCE OF TERRESTRIAL MAGNETISM.

This is estimated in two co-ordinate planes, the one horizontal, the other vertical; the former of which the geographical meridian is taken as the initial line. It is measured by the direction of the magnetic needle suspended to move in each of these planes. The needle hung so as to move in the horizontal plane is called the "Declination" or "Variation Needle"; that hung so as to move in the vertical plane the "Inclination" or "Dipping Needle."

To recapitulate: The needle of the mariner's compass moves in the horizontal plane, and receives its directive force from the magnetic poles of the earth. The dipping needle moves in the vertical plane, and this is controlled by the earth's line of force, or the earth's vertical magnetic force, which varies at different places upon the earth's surface. The earth has no vertical force on the magnetic equator, and at all places on this line the dipping needle takes a true horizontal position; or in other words the dip is zero. At the magnetic poles of the earth the dipping needle points vertically downwards, or in other words, the dip is 90 degrees. If the dipping needle is carried toward the equator from either magnetic pole of the earth it will gradually approach a horizontal position until the magnetic equator is reached, when a true horizontal position is attained.

## LONG TOWAGE SERVICES.

If there is any section of the world where towage service has been brought to a stage nearly bordering on perfection it is in the locality of the Great Lakes. One of the most modern appliances and a piece of mechanism which has led in no small measure to this stage of efficiency is towing by means of an automatic steam towing machine adapted to use flexible steel wire tow lines and controlled so as to give and take according to the weight and surging brought on to the tow line even by a string of 8,000-ton steel tow barges such as are now being generally built and used in the Lake Superior iron ore trade.

While claiming full credit for the splendid efficiency of the lake towing arrangements, it is perhaps just as well to note what is being done in this line of work elsewhere and we take great pleasure in quoting from the Liverpool Journal of Commerce, of recent date, the work of some of the tugs owned at that port, as follows:

"The arrival at Swansea of the Liverpool Tug Co.'s Blazer with the French steel barque Ville de Dijon in tow has already been reported in our shipping news. This ship was on her maiden voyage, and one of the large type of four-masted sailing ships, her register tonnage being over 2,000. She was built at Havre last year, and was at the time of her disaster on her homeward voyage from Mueo, New Caledonia for Swansea, with a cargo of nickel ore. Besides losing her spars she developed a leak, and considerable time had been lost since September 16 last, when she was towed into Monte Video by the German steamer Amasis. She had to be part discharged and re-loaded, and otherwise underwent temporary repairs, besides which legal proceedings have caused some difficulty at Monte Video over the salvage claim. The famous tug Blazer was commissioned to tow the Ville de Dijon home, her previous record marking her out for the undertaking, for a tow of over 6,200 miles is not a very frequent occurrence, and calls for capabilities possessed by very few tugboats afloat. The tug left Liverpool on 2nd January, and arrived at St. Vincent, Cape Verde Islands, on 10th January, and after taking in coal proceeded, arriving at Monte Video on 28th January. Owing to the Ville de Dijon not having completed arrangements for a crew, the start was postponed until the 4th February. The tug and her tow then began the long journey via Pernambuco, distant some 2,100 miles from Monte Video, which port was touched at for coaling purposes. St. Vincent, Cape Verdes, was reached March 9, and more coal was taken in there, the voyage being resumed the following day. Between this port and Madeira some heavy weather was experienced but nothing occurred to mar the success of the tow, Madeira being being called at as a final coaling station. The last stage of the trip, viz., Madeira to Swansea, being successfully accomplished, the Blazer thus breaking her own record. This tug has frequently figured in great towing feats, her excellent work during her career being of the most creditable character. Some of the most important jobs on which she has been engaged are probably the towing of the large steamer Mozambique from Ceara to Rio, as far back as October, 1893; the steamer Cambrian, in conjunction with another tug, from St. Michael's to Liverpool, in 1897; the steamer Augustine, St. Vincent, Cape Verdes, to Liverpool, late the same year, which voyage, covering a distance of 2,345 miles, was made in 9 days 7 hours; whilst more recent work includes: Cabenda (s), West Coast of Africa to Middlesbrough; Denton Grange (s), Las Palmas to Tyne; Hornby Grange (s), Vigo to Tyne; Burgundia (s), Fayal to Marseilles; Tremont (s), St. Michael's to London; Kilmahoe (s), Ferrol to Glasgow; Lokoja (s), Horta, Azores, to Havre; Duca di Galliera (s), St. Vincent to Genoa; Kinfauns, Azores to Cardiff and Gergovia (s), St. Vincent to Marseilles. For time and distance, however, the latest performance is the Blazer's record and that record has never been paralleled by any other craft.

The Cruizer, the largest and latest addition to the Liverpool Steamtug Co.'s fleet, has just completed the towage of the steamer Indra, 6,057 tons, from Aden to Liverpool, about 4,700 miles (towing the vessel through the Suez canal by herself without assistance), which, we believe, is the first time that any one tug has been allowed to attempt this feat.

We know that these tugs are fitted with the highest grade of flexible steel wire tow-ropes, but whether they have the patent automatic steam towing machines or not we can't say, if not, we should advise the Liverpool Tug Co. to write the American Ship Windlass Co. of Providence, R. I., manufacturers of this appliance for easy and safe towing.

Some of the experts on lake navigation declare that owing to the effect of the flowing of water through the drainage canal at Chicago, the Straits of Mackinac will be cleared earlier than usual, many expecting that the advantage gained will amount to ten or fifteen days. This fact is said to account for the early opening of the season by some of the northern lines. It is argued that the flow of water through the canal increases the speed of the flow through the Straits and thus clears the ice out more quickly. The usual time for the opening of the Straits is April 20.



**DAMAGE TO VESSEL BY BRIDGE.**

AMERICAN STEEL BARGE CO. SUE TO RECOVER FOR DAMAGES SUSTAINED BY REASON OF INTERSTATE DRAW REFUSING TO WORK.

The United States court of appeals has affirmed the decision of Judge Lochren, of the United States district court in the case of the American Steel Barge Company against G. G. Hartley as receiver of the Duluth-Superior Bridge Company. The case is one that excited considerable attention at the time of the accident in June, 1899.

The tug Record, in charge of Capt. Burnett, was towing the whaleback barge 134, from Missabe docks down St. Louis Bay toward the lake. The barge was loaded with iron ore and the draw of the interstate bridge did not begin to open immediately upon the signal from the tug. The bridge people contend that when the tug and barge were passing the draw of the Northern Pacific bridge upstream, the bridge tender signaled cars approaching, there being one going toward Superior and another coming toward Duluth, and upon the bridge. The tug and barge continued down toward the interstate bridge, and when the draw did not begin to open the Record blew another signal. It developed from the testimony that one of the cars safely passed the draw and that the other, also had, but was derailed just beyond the draw and so close that the vestibule hung over and produced an obstruction. The man in charge immediately attempted to open the draw when he saw the last car pass off it, but it could not be swung on account of the vestibule of the derailed car. The steamship people contend that the bridge company's man did not run up the ball signal that the draw was in trouble and as a warning for the boats to check. It is contended, on the other hand, by the bridge company, that he did give this signal, and they point to the fact that the tug swung alongside the barge to check her, a sign that he must have understood.

The steamship people claim that it was only when the tug saw the bridge was not beginning to open, and the vessels were getting so near as to make some action necessary, that the tug swung to the side of the barge. The master of the barge also dropped both of the anchors on his boat, but the heavy barge continued to press forward, wind and current assisting, and her upper works were damaged by coming in contact with the bridge. It is alleged by the bridge company that the car had been gotten out of the way of the draw and it had begun to swing before the tug and barge came on, and that the draw would have gotten out of the way had it not been for a sudden interruption of power. The bridge company explains this loss of the power by the fact that the anchors of the barge dragged up the cables from which the bridge derived its electric current.

The steamship company brought an action against the bridge company for a little more than \$2,000, but the award in the United States district court was \$1,043 and costs. Messrs. Searle & Spencer were proctors for the steamship company, and Thomas S. Wood, of Duluth, and M. H. Boutelle, Esq., represented the bridge company.

**BIDS ON GOVERNMENT WORK.**

In the abstract of proposals for constructing Chanoine Dam No. 2, Ohio river, received in response to advertisement dated March 6, 1901, and opened at Cincinnati, O., on April 10, by Major Wm. H. Bixby, Corps of Engineers, U. S. A., the following bids were made: C. I. McDonald, Pittsburg, Pa., \$158,440; The Evansville Contract Co., Evansville, Ind., \$118,967.50; Sheridan-Kirk Contract Co., Nicholasville, Ky., \$135,910; Edward Helz, Louisville, Ky., \$131,325. The difference between the highest and lowest bids (all of which will be submitted to Washington for final approval) amounts to \$39,472.50.

**Pilots—Penalty for Acting Without License—Suit to Recover.**—A suit based upon Code N. C. § 3519, which provides that, "if any person shall presume to act as pilot, who is not qualified and licensed in the manner herein prescribed, he shall forfeit and pay for the use of the commissioners forty dollars for every attempt at piloting," is one for the recovery of a statutory penalty, which, by the terms of the statute, is imposed upon the individual. The statute creates no lien upon the vessel, nor does any arise under the maritime law, and a libel in rem for the recovery of such penalty cannot be maintained. The *Carrie L. Tyler*, 106 Fed. Rep. (U. S.) 426.

**ELECTRICALLY DRIVEN BENDING ROLLS.**

(ILLUSTRATED.)

These rolls are solid wrought iron forgings arranged in pyramid form, and have a capacity for bending plates up to 12 inches in width and  $\frac{3}{8}$  of an inch thick.

The lower rolls are geared together, while the upper or bending roll is revolved by the friction of the plate in passing through. It is adjustable by power to suit the thickness of the plate and the radius to which it is to be bent. It has a hinged bearing at one end which may be turned down out of the way, while the other end has a long shank extending to a third support which retains the roll in position for the removal of rings or flues. This will be found a great advantage in boiler and other shops where plates are to be bent to a complete circle.

Midway between the housings a set of supporting rollers are placed to give additional stiffness to the lower rolls.

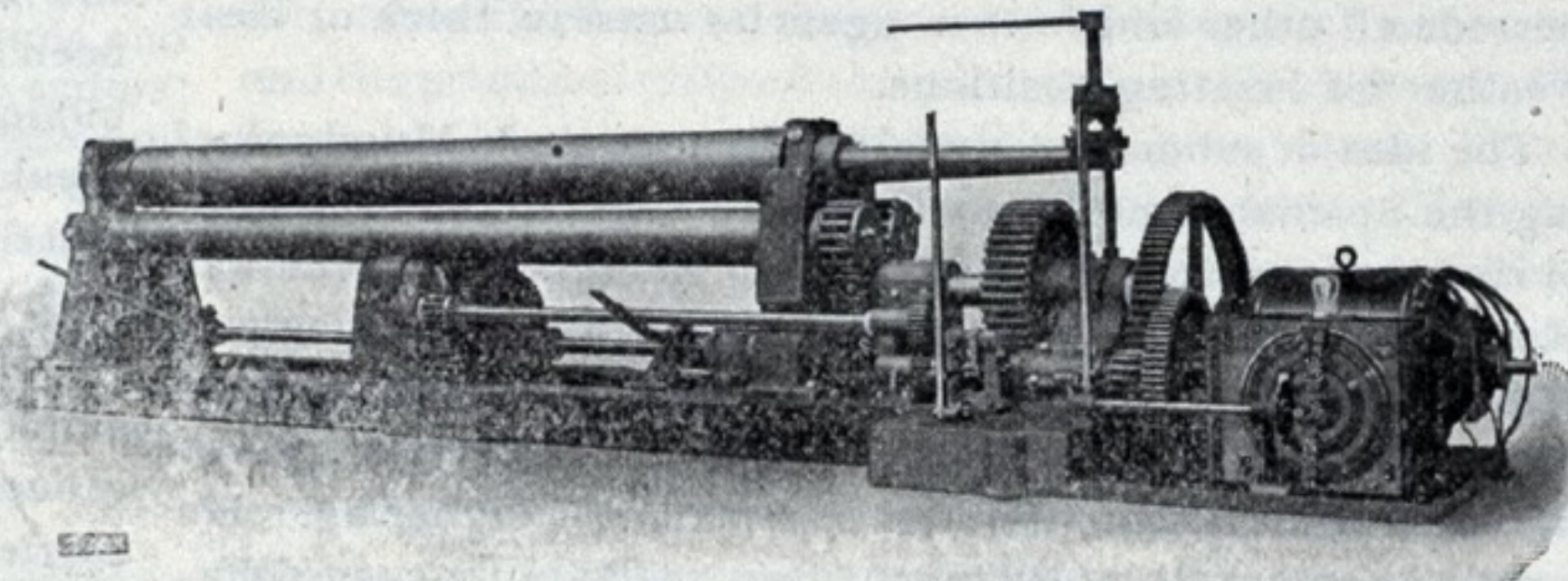
For very long machines additional sets of rollers are added.

The machine is driven by an 18 H. P. reversible, constant speed Bullock motor. For controlling the motor, an automatic rheostat is used to prevent the operator from throwing on the full current too quickly and burning out the motor.

The field consists of a circular yoke of special steel. While particular attention has been given to a reduction in weight, it has not been at the sacrifice of efficiency.

The pole pieces, built up from soft sheet steel of the highest magnetic quality, are securely bolted to the yoke. The shape of the punchings are such as to produce a saturated pole face, and this feature, coupled with carefully proportioned windings, is largely responsible for the sparkless operation of the motor, and is a feature greatly appreciated by engineers.

The field coils are machine wound and carefully insulated. The shunt and series coils of compound wound machines

**ELECTRIC BENDING ROLLS.**

are separately wound. The coils are slipped over the pole before it is bolted to the yoke, and, should it be necessary, are readily removed.

The armature core is built up from thin, carefully annealed sheet steel, possessing a high magnetic permeability. These discs are again annealed and then japanned. They are mounted upon the shaft and held firmly together by malleable iron end plates.

The windings, which are let into slots provided in the periphery of the armature core, are made of either copper bars or wire as best suits the requirements. The coils are machine formed, and after being formed are thoroughly insulated with mica and other high grade insulations. They are then baked in steam heated forms while under pressure, which removes all moisture and produces a perfect and very compact coil. The result is a coil that is less liable to be injured than when produced by the ordinary method, and one which requires no further insulation when placed in position on the core. The coils of armatures are held in position by wedges of hard, thoroughly dried wood, driven into notches provided near the top of the slots.

The commutators are built from drop forged bars of pure lake copper with selected mica insulation. They possess great durability and have an exceptionally even wearing surface for the brushes.

The brush holder is simple and highly efficient, giving absolutely no trouble. It is of the reaction type; no adjustment of the brushes is necessary, and when they are once set the motor will operate in either direction without sparking and under all variations of load.

THE chief of the general staff of the Norwegian Navy asks \$175,000 for a Holland submarine, holding that these boats are admirably adapted to the needs of a country like Norway.

**SHIPPING AND MARINE JUDICIAL DECISIONS.**

(COLLABORATED SPECIALLY FOR THE MARINE RECORD.)

**Collision—Credibility of Witnesses.**—The fact that the testimony of witnesses to a collision was manifestly incorrect as to certain matters of estimate or judgment, such as the distance between the vessels at a particular time, the length of time during which one of them kept a certain course, or the distance traversed on such course, does not impeach their veracity, and is not sufficient to discredit their testimony as to other facts which were obvious, and about which they could not be mistaken. *Jacobsen et al. vs. Dalles, P. & A. Nav. Co.*, 106 Fed. Rep. (U. S.) 428.

**Pilots—Tender of Services—Right to Compensation—Barge in Tow.**—The fact that a vessel is without power of her own, and is in tow of a tug having on board a licensed pilot, does not relieve her from the duty of taking a pilot, where all vessels of her tonnage and draught are required by a state statute to have a licensed pilot; and under Code N. C. § 3496, 3502, 3505, which require all vessels over a certain tonnage, whose master or first mate is not a licensed pilot, to take a pilot in crossing the bar at the mouth of the Cape Fear river, and authorizes the recovery of pilotage by any licensed pilot whose services are offered and refused, a barge of the requisite tonnage is liable for such pilotage although she is without propelling power, and in tow of a tug, whose master is a licensed pilot. *The Carrie L. Tyler*, 106 Fed. Rep. (U. S.) 422.

**Damage to Cargo.**—Iron drums of glycerine were stowed in between decks of a steamship, one tier high. A platform was built over them, and heavy bales of rags, extending nearly to the deck beams, were stowed over them. According to the testimony of all who observed the manner of the stowage of the cargo in between-decks, it was well secured and protected. When the vessel was a few days out it was found that the dunnage between some of the drums had worked loose, and it was replaced. On arrival in New York it was found that some of the drums had shifted from their original positions, and the glycerine had leaked on the cargo. The weight of testimony was decidedly to the effect that not only was the between-decks the proper place to carry the drums, but a proper place in respect to the distribution of the ballast. The evidence showed that, while the gales were not heavy, they came from different quarters, making cross seas of great violence, and the rolling and pitching of the vessel was excessive. Much of the time the crew could not lie down or sit down, and no meals were served. Held to show that the steamship was properly trimmed and the cargo was properly stowed, and that the damage to it in crossing the Atlantic was fairly attributable to a peril of the sea. *The Frey*, 106 Fed. Rep. (U. S.) 319.

**Trial—Requests—Instructions Already Given—Requested Instruction Properly Refused.**—In an action for damages to plaintiff's canal boat, sustained while in tow of the defendant's steamboat *Kirk*, by collision with the steamboat *Alpha*, the court instructed that if the pilot of the *Kirk* gave the signal to pass to the left, and under the circumstances prudence required him to keep to the right, the defendant was guilty of negligence, but, if the pilot of the *Alpha* gave the signals, it was the duty of the pilot of the *Kirk* to respond and pass to the left, unless there was imminent danger of a collision, in which case the pilot of the *Kirk* would be justified in not responding to the signal. Held, that if it was not error for the court to refuse the plaintiff's instruction that the defendant was bound to exercise proper care and diligence, whether such care required an observance or departure from the general rules of navigation, and the defendant should not have attempted to pass to the left of the *Alpha*, in compliance with its signals, if care and prudence for the safety of plaintiff's boat required the disregarding of the signal, and that the law does not require a boat to obey a signal to pass either to the right or left, when to do so endangers the boat so signaled or boats in tow, as such requested instruction was covered by that given by the court. *Wagner vs. Buffalo & R. Transit Co.*, 69 N. Y., Supp. 113.

**Effect of Misstatement in Pleading—Steamer and Sailboat.**—A statement in the answer of a steamer to a libel for collision with a sailboat that the boat changed her course when "some one hundred feet" off the steamer's bow, is not of such absolute fact as to preclude the steamer from showing that in fact the sailboat changed her course, and attempted to cross ahead of the steamer, and that the collision was due to such fact, although, if the vessel had been in the positions and at the distance stated when the change was made, collision would have been impossible, having regard to the relative speed of the two vessels as shown by the evidence. The evidence showed that libellant was in a small sailboat, sailing in the same direction as the steamer. The evidence of libellant was that he continued his course until struck and sunk by the overtaking vessel. A passenger with him testified practically to the same fact, though his testimony was impeached by evidence of contradictory declarations. Testimony of persons on board the steamer was all to the effect that, just before they overtook the sailboat, libellant changed the course of the same so as to go directly in front of the vessel. There was evidence that libellant was intoxicated at the time of the collision. Testimony for the defendant was in no way discredited, except by the contradictory testimony of libellant. Held, that it being very clear from the evidence that the fault of the steamer, if any there was, was slight compared with that of the libellant, a decree should be rendered in favor of the defendant. *Jacobsen et al. vs. Dalles, P. & A. Nav. Co.*, 106 Fed. Rep. (U. S.) 428.



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CLEVELAND, O., APRIL 18, 1901.

THE Marine Engineers' Beneficial Association is no doubt a very worthy organization, and ably presided over. There are others.

VESSELOWNERS are being held firmly to a fulfillment of the requirements endorsed by the lake engineers as an organized body. The argument arises, though, that the owners are not fulfilling to any extravagant extent these times.

How like a row of bricks standing on end and close together are the lake industries, here we have thousands upon thousands of men depending on the vessel trade, laying idle on account of the engineers' strike. Unless adroitly handled strikes seem to be bad medicine all around.

THERE is still a field for lumber-carrying schooners and barges in the lake trade. The wooden bottoms are becoming old, obsolete and too small. There is no question but a fleet of specially built steel barges would be found a paying investment for those engaged in this class of business.

VESSELS frequently proceed safely along on their course by keeping a lookout under the edge of a fog, also by a mast-head lookout guiding the vessel to an anchorage over the upper edge of a fog bank, now it is proposed to sail through an impenetrable fog by the aid of submarine signaling. Well! wonders will never cease.

IT is generally good policy to allow your adversary the benefit of your belief in thinking that he is perhaps as well heeled as yourself. There are several non-committal words in the foregoing, which those who sought to disrupt an old established association in support of their own organization now probably feel the weight of, or may later. In any case, the lesson is being taught day by day, as the clouds roll by.

WITH the advent of the prospective enrollment of vessels under a central management at Cleveland, special attention should be paid to uniformly worded bills of lading, and, or, charter parties, as entered into by the managers of the floating property. In this connection, the method of payment of freight, dispatch at loading and discharging ports, which, involving as it does a demurrage clause, cannot be too clearly stated. Other clauses to be adopted in a generally accepted form of bill of lading will no doubt suggest themselves to those who place the management and freight earning ability of their floating property in the hands of the new organization. Evidently though, and as a matter of course, the best vessels will always be in a position to earn the most money.

## SUBMARINE PILOTS.

While every possible device is applied and numerous precautions are being observed on shipboard for the better protection of life and property, as well as the safe and rapid transportation of merchandise, the people on shore are by no means indifferent to the perils which beset the mariner, and the important interests placed under his charge.

Immense strides have been made during the past decade in the constructive ability and mechanism introduced more especially in the world's oversea carrying trade to render Neptune-like steam, a servant of the people, nor is it our purpose at this time to enumerate the thousand and one innovations, inventions and appliances already in use for this purpose.

The subject of piloting remained much in the same category as type setting, wherein it was said that nothing could supersede the physical skill and intelligence of the compositor, but we have today a mechanical contrivance that can discount the best efforts of several compositors, and we may have also as close at hand a mute, or rather automatic, scientific assistant that will place at a marked disadvantage all the hard-headed and well-earned lore of the most skillful and best advised human pilots on the face of the earth.

It is easily demonstrable that a person can remain in his cabin or stateroom and navigate a vessel over the, not boundless, but well defined ocean limits, given of course the necessary particulars. It is now proposed, and in fact assured from a scientific standpoint, that a person can as easily pilot a vessel from a protected position as she can be navigated, and herein is contained the factors of safety and success in moving a floating body over the universe. Professor Elisha Gray, who so unostentatiously shipped his cable a few months ago, and whose tributes to science seemed never to have been appreciated, grasped the idea of submarine signaling when the subject was presented to him by Mr. Arthur J. Mundy and together they developed a new system of submarine signaling which appears to be destined to supersede all other and former agencies used in thick or clear weather for locating positions.

The idea of submarine signaling came to A. J. Mundy during the Spanish-American war when he was in the Mississippi river going from New Orleans to St. Louis. There was at that time much alarm over the possibility of Spanish war vessels attacking the gulf coast. Mr. Mundy's thoughts turned to devices for safety through signaling in times of war, and he hit upon the idea of submarine signaling. He recalled the simple experiment often made by boys of striking two stones together under the water and hearing the sound. Mr. Mundy wrote while still on the Mississippi steamer to Prof. Elisha Gray, an old friend, and put the idea and its possibilities before him. Prof. Gray at once joined in the enterprise with Mr. Mundy, and together they developed their new system of signaling, which immediately claimed the interest of the Canadian government and from experiments already conducted it is learned that vessels, approaching the land, equipped with receivers, will hear the sound at least ten miles out from those points. The bells ringing together and heard aboard ship will indicate a direct course to the mouth of the harbor, even though thick weather be on. Should only one bell be heard the pilot seeks a course until he again hears the sound of the two bells. On the ringing of either bell he can determine his position by the use of a chart. The bells will be different in tone in order to be recognized.

Other uses of this form of submarine signaling it is believed will make it possible for one ship to telegraph to another and thus avert collisions and also enable light-ships to communicate with the shore.

There is an excellent stretch of coast, and one now becoming very important to the United States as well as Canada in the reach between Anticosti and Montreal, and, as the Dominion government has about appropriated a large sum of money for aids to navigation in this locality, it is to be hoped that the stations, light-houses, etc., will be fitted with this new submarine pilot, if only as an assistant, in its initial stage, as well as to give confidence in its accurate workings to the human but not infallible pilot carried on the vessel.

The project to establish a central chartering bureau in Cleveland, is a step in the right direction under existing conditions. The Lumber Carriers' Association, however, took the initiative, but it was not fully organized in one season, nor can it be expected that the new institution will be placed on a smoothly working basis all at once.

PERHAPS Chicago now wishes that she had followed the adage "Let all things be done decently and in order" and especially so as regards her drainage canal. It was opened in a hurry, without waiting for War Department sanction or Congressional action. Then the trouble began and has continued. St. Louis brought the threatened suit, claiming its water supply to be polluted by Chicago sewage. To meet that complaint, and to prevent hostile action by places along the line of the big ditch which had more cause for similar complaint, the flow from Lake Michigan was increased, although not to the full extent required by the act creating the drainage commission. Now the War Department has interfered in the interests of the commerce of the port and ordered the intake from the lake reduced 100,000 cubic feet or from 300,000 to 200,000 cubic feet per minute. How Chicago can now square herself as between the United States Supreme Court and the War Department is the query.

FRIENDS of western advancement in transportation circles and commercial progress will be sorry to learn that the \$26,000,000 Erie canal improvement bill was officially abandoned on Tuesday, when, after a two hours' conference with Gov. Odell, the canal adherents and Republican leaders conceded that the measure would be swamped if it came up for a vote. It will, therefore, be allowed to die in the committee of the assembly. No greater boost could have been given to the St. Lawrence route than the failure of the New York legislature to improve its State waterway. The Dominion government, as well as private enterprises, can now go ahead with their contemplated expenditures secure in having the only outlet to the coast, adequate or otherwise. The railroads now rule supreme and south-western products will very properly increase the export trade from southern ports.

THERE is but little doubt but that the firms engaged in securing government contracts for river and harbor work on the lakes will openly conjoin interests. There has long been a feeling that a tacit understanding existed between all bidders when submitting figures on proposals for pier, or breakwater building, pile driving, dredging, etc., and it is just as well, perhaps, to establish a central clearing office with each firm holding stock in the company. On the other hand, it is possible that officers of the Corps of Engineers would prefer submitting competitive bids to the chief of engineers, failing which, considerable of the work might be carried on under the more direct supervision of the officer in charge of each district.

SECRETARY LONG has had compiled in response to an inquiry from the west, a table showing the proportion of native born and foreign born sailors in the navy. This shows that during the Spanish-American war, out of a total force of 22,828, the total of native born sailors was 14,560 and of foreign born 7,422. The percentage of native born sailors was 65, and, including foreigners who had become Americans by naturalization, the percentage was 80. The statement also shows that of the foreign born sailors more than one-half have become naturalized or have declared their intention of becoming citizens. The statement further shows that the navy is more exclusively American than is generally known.

AFTER passing a voluntary examination for second-class pilot, his license is endorsed "Empowered to take charge of a watch as assistant to a first-class pilot." Can this officer be left solely in charge of the deck? or is he of no more use than a big black dog? Strange that the local inspectors so minimize their examination. The Toledo officer would give a man a chance to strand a 1,000 ton boat, but not one of 1,500 tons, until poked fun at by his supervising inspector.

THERE will be so many patented labor saving appliances and inventions in use in the near future that it will take a Phila-ma-York lawyer to keep track of the agreements entered into with the union labor required to handle or supervise them. The battery of "clam shell" iron ore discharging mechanism in use solely at Conneaut, O., required the leisure and consultative deliberations of a special committee on the wage scale for shovelers to clean off the skin.

WHERE are all these lake engineers whose appointments to boats were heralded a little while ago? This was surely a "goak" on the opening of the centennial season of lake navigation.



**VESSEL TAXATION—STATE OR FEDERAL.**

A call upon the prominent citizens for their views on current topics by the Evening Telegram, Superior, Wis., brought the following communication on vessel taxation from Mr. James Bardon:

"It is to be hoped that success will attend the efforts inaugurated by Assemblyman L. Proot and warmly supported by Senator Mills and Assemblyman Andrew to bring about such changes in the laws respecting vessel taxation as will place Wisconsin on an equal footing, at least with Minnesota and Michigan.

"Superior is vitally interested in the question. Despite the advantages afforded by spacious harbor room and the only drydocks and shipyard and the best repair shops on Lake Superior, this city, owing to the high taxes imposed by the laws of Wisconsin upon water craft as compared with other states, derives but a mere fraction of the benefits always resulting from a port headquarters. Vessels avoid Superior and are listed for taxation at other ports, and hailing from these ports, they not only widely advertise, but give prestige to such ports. They winter in them, and Superior loses the benefit of the homes of the officers and sailors, who establish themselves and their families at the port of call of their vessels; of the watchmen, the host of painters, carpenters, upholsterers, sail makers, machinery men and others usually employed in overhauling and preparing a sail or steam craft for the season of navigation; the banking, the supply stores, the ship-chandlers, and the admiralty lawyers that establish themselves and thrive at a vessel rendezvous.

"It has been suggested that the taxation of vessels should be assumed by the general government. The arguments for such assumption are many and weighty. The revenue that would accrue from even a very moderate tax to be levied either on a tonnage or ad valorem basis upon the vast amount of vessel property owned and operated in the United States would add many millions of dollars to our revenue and relieve the strain of taxation in other directions. It is undoubted that under the present system of state control the taxes derived from such movable, though valuable, properties, are merely nominal, and that much of such property escapes taxation altogether.

"Can the general government assume these powers, and would the states yield to it? The answer is probably yes. The general government spends millions of dollars annually in deepening the harbors, building canals, locks, jetties and piers, building and maintaining light-houses, fog-horns, buoys and other aids to navigation. It surveys, sounds and maps the waters and harbors and furnishes charts to sailors; it maintains a life-saving service; it inspects boilers and hulls; it licenses captains, engineers and pilots, keeps records of all vessels, their types and capacities to the most minute detail, compels reports and clearances at custom houses; in fact, assumes nearly entire control, receiving but a trifle now and then for fees and licenses, yet allowing the local authorities to impose and collect for their own uses taxes which should in justice go into a fund to lighten these immense outlays.

"A move in Congress to put vessel property into the revenue list would undoubtedly meet with favor. Today an interior state like Kansas or Colorado, having no harbors, contributes to navigation proportionately as much as Wisconsin or Michigan, while deriving no benefit from local improvement or expenditure upon the works.

"In case the legislature of Wisconsin fails to give relief, should we not consider the wisdom of going to Congress with this matter? Governmental taxation once applied, local favoritisms and discriminations would cease, and a port having advantages and facilities like that of Superior would get its fair share of the vessel business. Our citizens should at least keep the question alive, for no more important one affecting home interest confronts them today."

In line with the foregoing it is announced that the governors of the various states are beginning to make their appointments of delegates to attend the conference on taxation called to meet at Buffalo May 23 and 24, 1901, by the National Civic Federation. At the headquarters in Chicago notice of the appointment of the delegates has been received from Gov. Dockery of Missouri, Gov. Hill of Maine, Gov. Lingino of Mississippi, and Gov. Toule of Montana. The call for the conference is signed by leading economists, tax experts and public men representing all sections of the country and all interests. The latter invitation says:

"For many decades the states have been building up independent systems of taxation without reference to each other. Until now we have a state of affairs bordering on chaos, where each state is practically fighting nearly every other state. Some property is taxed three or four times, while other property is not taxed at all. Corporate activity has largely changed the character of individual investments. Industry has overstepped the boundaries of any one state and commercial interests are no longer confined to mere local limits. This conference will be the first attempt in this country to work out some uniform principles. It is not expected to settle any of the problems in the two days' discussion, but will be a beginning and may result in the appointment of a permanent commission to work out some basis for future action."

Chief Engineer Herlihy, whose license was revoked on the ground of negligence in connection with the wreck of the Rio de Janeiro, has decided to appeal, on the ground that he did not get a fair hearing according to law.

**CAPT. A. B. WOLVIN, GENERAL MANAGER OF THE FLEET OWNED BY THE STEEL CORPORATION.**

It is announced that a separate vessel company will be organized subsidiary to the United States Steel Corporation, with D. M. Clemson, heretofore of the gas and transportation departments, of the Carnegie organization, as president. A. B. Wolvin, president of the Lake Carriers' Association, will be general manager, in charge of vessel operation, with headquarters in Duluth. Edwin S. Mills, heretofore manager of the Pittsburgh Steamship Co., and Cleveland representative of the Carnegie ore and sales interests, will be assistant general manager, with headquarters in Cleveland. The Cleveland offices, it is understood, will have charge of vessel dispatch, distribution of ore to works and allotment of ore to docks.

**AMERICAN ASSOCIATION OF MASTERS AND PILOTS.**

The American Association of Masters and Pilots of Steam Vessels appears to have gained a considerable membership at lake ports during the past few years, several Harbors or Lodges having been organized this winter.

A brief resume of the aims and objects of the Association are as follows:

For the elevation of the profession, to create a fraternal feeling between the employers and employes and protect their members by employing counsel at all investigations before local or supervising inspectors of steam vessels, where the issue is the suspension or revocation of license, also to look after all matters of legislation in the law laid down for their government, to assist the owners in any matters of legislation and to show the employers that their association is as largely in the interest of the owners as the men. The Association being national in scope and character has much interest in Washington in all matters of legislation of interest to the members or their employers. The Association was established January 17, 1887, in New York city. It has now fifty-three Harbors and they extend all along the Atlantic coast and the principal cities of the lakes and navigable rivers. Their annual conventions are held in Washington every January, and usually last from a week to eight days. They have worked in conjunction with the Ship Masters' Association of the lakes, on the matter of re-examination after expiration of the five years license and succeeded last January in having the Board of Supervising Inspectors amend the rule so that all men in active service have only to present their license and receive a renewal without any re-examination, and have also had many laws amended to the benefit of the licensed officer.

**CANADIAN PORTS WEEDED OUT.**

At a meeting of the grain exporters operating on the New York Produce Exchange, held on March 20, the following named ports were voted as the official Atlantic coast list; Boston, New York, Philadelphia, Baltimore, Newport News and Norfolk. It was decided to reconsider the action taken some time ago by which St. John, Halifax, Montreal, Quebec and Portland were added to the list of ports which, under the rules of the Produce Exchange, shall constitute a good tender on "Atlantic seaboard" contracts. Letters were read by the exporters, claiming that the system of inspection in operation at some of these ports was inadequate and that the out-turn of the shipments when they arrived abroad was such as to cause dissatisfaction and particularly reflect upon Atlantic seaboard contracts. A motion was made to include Montreal in the list of Atlantic ports, but it failed. This puts Portland, Me., and Quebec on the "blacklist" although Portland at least has lately made such material improvement in its inspection methods as to entitle it to better consideration. The Canadian Government will now place official inspectors for grain and lumber at the receiving and clearing ports. The new law will provide for the fixing of grain inspection districts, one probably for the East and the other for the West, each under the control of a chief inspector, with assistants under his orders, the whole system so arranged as to make the inspection efficient and uniform, which it has not been in the past. The Montreal harbor commissioners on March 19, on petition of the Corn Exchange Association, ordered a reduction of one cent a ton in the grain wharfage, making the tariff, when approved by the government at Ottawa, 3 cents per ton. The reduction was asked for because in shipping grain the wharves were not used at all, and because the reduction was necessary to put the port on an equality with Quebec.

**WIDE OPEN FISHING—CANADIAN VIEWS.**

The Windsor Record says: Mr. Fuller's fishing bill, that has just been passed by the Legislature of Michigan, is of interest to our fishermen. The bill among other things, provides that whitefish can be taken from Lake Huron and Erie, Green Bay and the rivers Detroit and St. Clair, bordering on the state of Michigan, from the 1st of January to the 20th of November in each year. A few days are given after the 20th of November to get the nets out, it means, that practically, there is no close season for whitefish in Michigan. In the Detroit river the whitefish spawn from the 1st to the 15th of November, so that Michigan fishermen are allowed to catch this fish right through the spawning season.

The fishery departments at Ottawa and Toronto enforce a close season on this side during the month of November. Last year owing to the whitefish being slow in coming into the river, the open season was extended to November 15th, this concession was so late in being announced that very few of our fishermen were able to take advantage of it.

For years our Government has been protecting the fish in our international waters, while our neighbors have been getting the benefit. Year after year we have been told that there was a probability of our neighbors joining with Canada in a close season in international waters, but their are fewer indications of their doing so than there were. They have been humbugging our fishing department. The only possible way to induce them to agree to a close season is for our Government to do away with any close season. This might bring them to some reasonable terms and is the only way it can be done.

**FLOTSAM JETSAM AND LAGAN.**

A dispatch from Ottawa says the Welland canal will be opened for navigation April 22 and the other canals on May 1.

The Sage Age.—Although all the old British battleships had elaborately carved figureheads modern vessels are not allowed any such sort of decoration by reason of an order of the admiralty issued some years ago.

An Irish professor created a laugh, when called upon to speak at the Birmingham Church Congress, by beginning with a rich brogue, "Before I begin to speak, let me say"—No one heard any more of the sentence.

"Well, Johnny, do you want me to help you with your arithmetic again to-night?" "Yes, Pa, please." "What does the teacher say when you show him the sums?" "He says I'm getting more stupid every day."

A telegram from Commander Snow, U. S. N., at San Francisco, states that the Union Iron Works will launch the battleship Ohio on May 18. President McKinley and his cabinet will be present at the launching also Gov. Nash and party from Ohio.

Judge Seaman, of Milwaukee, decided the suit of the Lake Michigan Car Ferry Co. against E. G. Crosby, in favor of the plaintiff. The suit was for the value of a barge which was lost while in possession of the defendant. The barge was claimed to be worth \$4,500, but the question of value was referred by the judge to a master.

There is every indication that a number of lake engineers will lose good situations on account of the strike so earnestly worked by George Uhler, president of the engineers' association. Many men who had worked for years to secure a good standing in a line of boats will not be re-engaged on the same terms and others will be replaced.

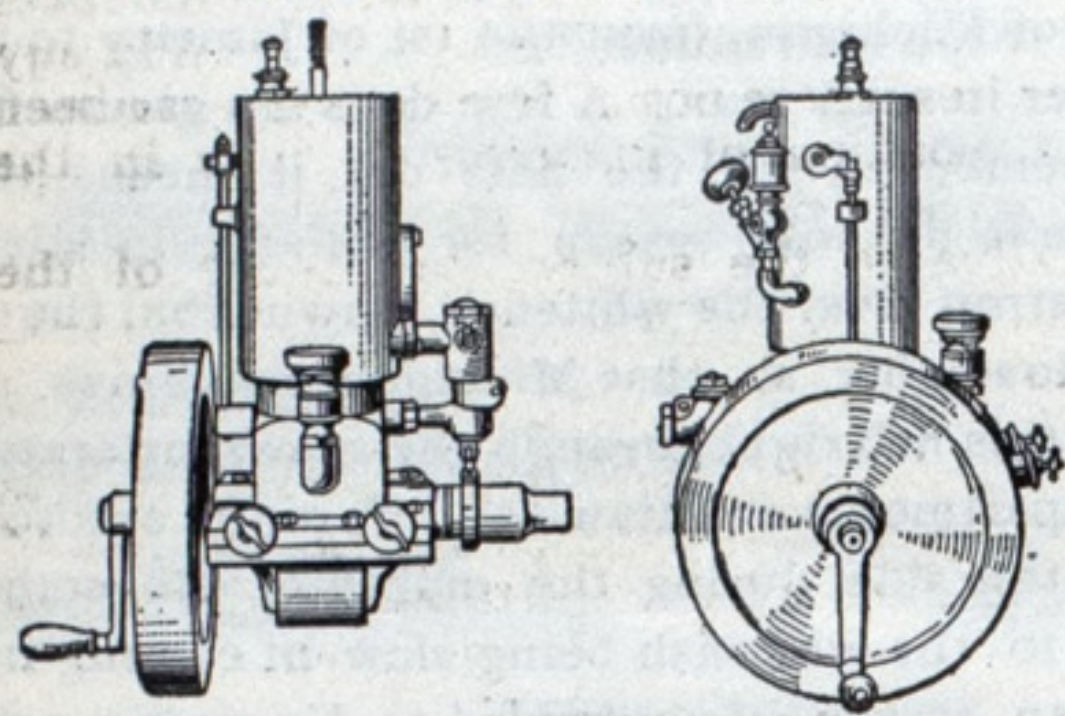
Surfman Ellingsen, of the Fort Point Life-Saving Station, at San Francisco, who was suspended on the charge of negligence in failing to report the distress signals of the Rio de Janeiro, has been ordered reinstated by the Washington authorities. The report of the superintendent showed that there was no proof that the Rio made any clearly recognizable signals of distress.

An important decision has just been rendered by Inspector General Dumont, of the hull inspection service. The Grand Haven office has been issuing second-class pilot's papers endorsed: "Empowered to take charge of a watch, as assistant to a first-class pilot." Many inspectors refused to accept this as lawful, there appearing to be a clause in the law by which on boats over one hundred tons burden none but first-class pilots might be in charge. General Dumont supports the opinions of the Grand Haven inspectors that their endorsement was right, thereby settling a point which has been of no little interest to owners and insurance companies. This is a very negative sort of ruling. Unless the word "only" had been added to the endorsement it is not yet understood that the second-class pilot can take sole charge of a watch or if he is only to be there as assistant to the first-class pilot and both be on deck at the same time.



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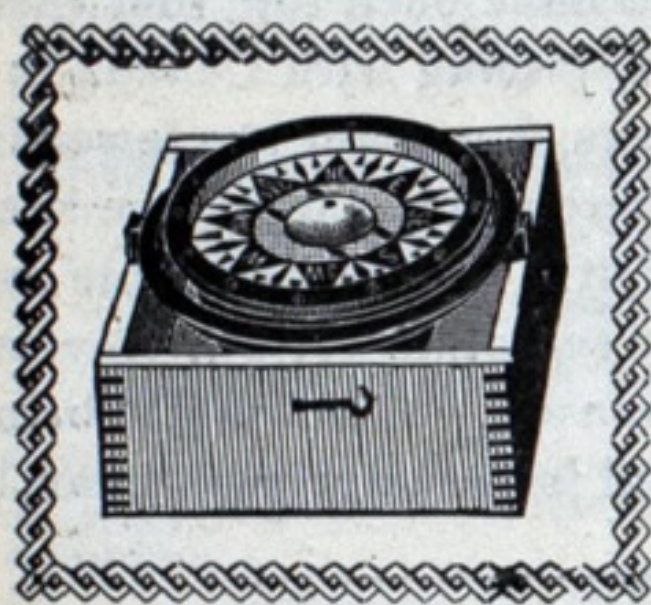
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### CORRESPONDENCE.

We do not hold ourselves responsible in any way for the views or opinions expressed by our correspondents. It is our desire that all sides of any question affecting the interests or welfare of the lake marine should be fairly represented in THE MARINE RECORD.

#### THE CELTIC'S DECKS AND DIMENSIONS.

CHICAGO, April 16, 1901.

To the Editor of the Marine Record.

In your issue of the 11th inst. you state that the new White Star Liner Celtic, just launched for the trans-Atlantic service, has nine decks, but you only give the names of seven. As I am somewhat curious to know how the nine decks are named, I would thank you for this information at as early a date as you can find it convenient to look it up—also give me her hull dimensions. J. E. W.

The names of the several decks of the Celtic are as follows: Lower-orlop, orlop, lower, middle, upper, bridge, upper-bridge, boat and sun decks. The general over-all dimensions of her hull are: 700 feet in length, 75 feet beam and 49 feet depth of hold; tonnage 20,880 gross and 13,650 net; her displacement will be according to the quantity of cargo carried.—ED.

#### RESPECTING INQUIRIES INTO STRANDING.

CHICAGO, April 16, 1891.

To The Editor of the Marine Record:

The editorial suggestions in last issue of the MARINE RECORD, as to the line of inquiry to be pursued in cases of strandings, do not cover all the essential points for determining the guilt or innocence of the navigating officer.

1. The question as to tide and currents cannot be answered satisfactorily by anybody aboard, because of vessels lacking the means of determining currents. The supply of the means is essential to answer that question.

2. The time of the adjustment of compasses is immaterial. Of value is only a knowledge of the deviations, when and by whom they were last determined.

3. The actual course and distance made good is obtainable only by the ground log, with which vessels are not equipped; it is, therefore, impossible for any one to answer the question, and to make out how far the vessel was from her supposed position at the time of foundering. Her position by common log would avail nothing, because of being one of the principal causes of stranding.

4. What a competent lookout can accomplish in thick weather, it is impossible to imagine. Used to trust in the lookout in clear weather, more than in their faulty methods for finding position, thick weather brings always vessels to grief, in spite of their lookout.

5. Sounds from shore are never to be trusted (see the warning of the Canadian Lighthouse Department), it is only the sounds of such guides as are approachable close to for verification, namely, whistling and bell buoys. The

lead is of no use, if the bottom of the sea possesses no distinguishing features that can not easily be mistaken on the course made good; and as the latter is not known, because the ground log is not used, deception by soundings is generally the case. Without safety curves, the haphazard cast of the lead is like the attempt of a drowning man to catch hold of a straw.

Therefore, so long as vessels use faulty methods in ascertaining position, and ignore the ground log (within the 100 fathom line) as the only true guide for finding course and distance made good, so long will all inquiries into the causes of stranding, conducted on the same erroneous basis, amount to nothing.

JOHN MAURICE.

Civil Engineer and Nautical Expert.

#### VISIBLE SUPPLY OF GRAIN.

As compiled for THE MARINE RECORD, by George F. Stone, Secretary Chicago Board of Trade.

CITIES WHERE STORED.	WHEAT. Bushels.	CORN. Bushels.	OATS. Bushels.	RYE. Bushels.	BARLEY Bushels.
Buffalo.....	1,620,000			18,000	222,000
" afloat.....	447,000				
Chicago.....	10,830,000	5,595,000	2,776,000	474,000	201,000
" afloat.....	1,283,000	3,484,000	1,344,000	26,000	
Detroit.....	400,000	446,000		30,000	15,000
Duluth.....	9,902,000	5,187,000	1,294,000	406,000	74,000
Fort William, Ont..	2,155,000				
Milwaukee.....	1,023,000	638,000	635,000	1,000	22,000
" afloat.....	75,000	331,000	472,000		72,000
Montreal.....	137,000	12,000	370,000	10,000	41,000
Port Arthur, Ont....	245,000				
Toledo.....	914,000	1,095,000	324,000		1,000
Toronto.....	68,000		2,000		35,000
Grand Total.....	51,873,000	22,019,000	11,271,000	1,095,000	819,000
Corresponding Date, 1899.....	55,273,000	24,789,000	7,543,000	1,311,000	871,000
Increase.....		29,000			
Decrease.....	2,017,000		128,000	17,000	31,000

While the stock of grain at lake ports only is here given the total shows the figures for the entire country except the Pacific Slope.

#### VESSELS CLASSED.

Vessels classed and rated this week by the American Bureau of Shipping, New York, in the "Record of American and Foreign Shipping," are as follows:

American screw Hyades, screw Pleiades, ship Bangalore, ship Foohing Suey, schooners Rebecca Palmer, Malcolm B. Seavey, Landseer, Metinic, barge Matanzas, Swedish brig Svante, Norwegian bark James G. Pendleton, and British half brig Harry.

Construction of Insurance Contract.—Where the construction of a policy of marine insurance depends on questions of general commercial law, the federal courts are not bound by the decisions of the courts of the state in which the contract was made, but by those of the supreme court of the United States. Washburn & Moen Mfg. Co. vs. Reliance Marine Ins. Co., 106 Fed. Rep. (U. S.) 116.

### NOTES.

W. L. Capps has succeeded Francis T. Bowles as secretary and treasurer of the Society of Naval Architects and Marine Engineers.

MESSRS. LEWIS & CRANE, Seattle, Wash., lumber merchants, shippers and brokers, handle a great deal of Douglas fir for use as spars, deck planking and all upper works. The writer was under the painful necessity of cutting away a ship's three lower masts which were of this Douglas pine, after fifteen years service they were as sound and fresh as the day they came out of the woods.

THE Scientific American of April 13 says: "When the last Congress adjourned without making any provision for new battleships and cruisers—the first time such an omission has been made in ten years—the United States Navy was set back among the growing navies of the world by just twelve months in time, and by exactly the number of battleships and cruisers which represent the average annual addition that should be made at this time to our navy, if we are to maintain even our present relative standing among the world's powers."

THE new torpedo boat destroyer Goldsborough, recently finished at Portland, Ore., in her second speed trial, on April 9, over the prescribed course, attained a speed of 31.84 knots, the requirement being 30 knots. Cardiff coal was used, and the engines and boilers worked to perfection. With coal obtained from a mine on the Pacific coast a speed of 28.5 knots was obtained on a previous trial. The Perry, a similar boat, constructed at San Francisco, in a trial on the same date failed to obtain the contract speed. As a result, the hull of the vessel will be subjected to some alteration.

THE Bullock Electric Mfg. Co., through its secretary, Mr. James Wilson Bullock, has acquired control of 15 acres of land directly opposite the present plant, at East Norwood, O. Upon this tract the Norwood Foundry Co. will erect a foundry building 200 feet long by 150 feet in width; a pattern storage house, fire-proof construction, 50x150 feet, three stories high; and a modern office structure. All these buildings will be built of buff pressed brick with steel frames and trusses, to conform to the present buildings of the Bullock Electric Mfg. Co. The foundry will be equipped with three electric cranes, the largest of which will have a capacity of 50 tons. The side bays, which will be 25 feet in width, will be served by hand traveling and jib cranes. The plant will be of the most modern character, and electricity will be used for power and lighting throughout. While this foundry will be operated under the name of the Norwood Foundry Co., it will serve primarily the needs of the Bullock Electric Mfg. Co. It will also be in position to handle outside orders in the most satisfactory manner. That it will be operated successfully is guaranteed by the fact that it will be under the direction of Messrs. Hoffinghoff & Laue, of Cincinnati, a firm whose skill in handling foundry work is everywhere acknowledged.



## INSPECTOR OF BOILERS.

OFFICE OF CAPTAIN OF THE PORT.  
MANILA, PHILIPPINE ISLANDS.  
May 21, 1901.

The United States Civil Service Commission announces that on May 21, 1901, in accordance with the request of the Philippine Civil Service Board, an examination will be held in any city in the United States where postal free delivery has been established, for the position of inspector of boilers in the office of the Captain of the Port of Manila, P. I.

The examination will consist of the following subjects and weights:

Subjects.	Weights.
1. Writing reports in connection with Steamboat-Inspection Service.....	10
2. Practical questions relating to marine boilers and machinery.....	70
3. Experience.....	20
Total.....	100

Applicants for this examination will be required to prove that they have had five years' experience as chief or first assistant engineer of a sea-going vessel, or vessels, of not less than one thousand (1,000) indicated horse-power, or the following which will be accepted in lieu of a part thereof; viz.

(1) Graduation from an approved technical school conferring a degree, after a four years' course of study, including the subjects of mechanical or electrical engineering. This degree will be considered as the equivalent of two years of the above described sea experience. The remaining three years' experience must have been obtained at sea as above described.

(2) Three years' experience as foreman, draftsman, inspector, or in any other position of equal importance, in the manufacture and installation on board ship of marine machinery at an approved ship or engine building establishment, will be considered as the equivalent of three years of the above described sea experience. The remaining two years' experience must have been obtained at sea as above described.

Applicants who are admitted to this examination, after qualifying in any of the above named classes, will be given a credit in experience of 70% for the above as a minimum, and for each additional year's experience a credit of 6% will be added to it, up to and including ten years, for which a credit of 100% will be given.

Maximum age limit 40 years.

From the eligibles resulting from this examination it is expected that certification will be made to the position of inspector of boilers in the office of the Captain of the Port of Manila, Philippine Islands, at a salary of \$2,250 per annum. The person appointed will be required to pay his traveling expenses from his place of residence in the United States to San Francisco, but his traveling expenses from San Francisco to Manila will be borne by the Government. He will be allowed half salary from the date of embarkation at San Francisco and full salary from the date of his arrival in the Islands.

This examination is open to all citizens of the United States who comply with the requirements and desire to enter the service. All such persons are invited to apply, and applicants will be examined, graded, and certified with entire impartiality and wholly without regard to any consideration save their ability as shown by the grade attained in the examination.

Persons who desire to compete should at once apply to the United States Civil Service Commission, Washington, D. C., for application forms 2 and 375 which should be properly executed and filed with the Commission.

April 13, 1901.

## NOTICE TO MARINERS.

UNITED STATES OF AMERICA—NORTHERN LAKES AND RIVERS—WISCONSIN.

TREASURY DEPARTMENT,  
OFFICE OF THE LIGHT-HOUSE BOARD,  
WASHINGTON, D. C., April 9, 1901.

KENOSHA PIERHEAD LIGHT STATION.

Notice is hereby given that, on or about April 25, 1901, a blower siren, operated by compressed air, will be established at this station, on the outer end of the new north pier, Kenosha Harbor, westerly side of Lake Michigan, to sound a continuous blast during thick or foggy weather.

The signal is located in the tower.

By order of the Light-House Board.

FRANCIS J. HIGGINSON,  
Rear-Admiral, U. S. Navy, Chairman.

LIGHT-HOUSE ESTABLISHMENT,  
OFFICE OF THE LIGHT-HOUSE INSPECTOR,  
ELEVENTH DISTRICT, DETROIT, MICH., April 12th, 1901.

Notice is hereby given concerning the establishment on the opening of navigation, 1901, of barrel buoys to mark the wrecks of the crib structures in Lake St. Clair and St. Clair River, Mich.

LAKE ST. CLAIR 20-FT. CHANNEL.—The wrecks of the four cribs in this channel (which will have gas lighted buoys numbered 1, 8, 13 and 20, respectively, placed abreast of them on the edges of the channel) will be further marked by placing over each as near as possible, a barrel buoy painted half red and half white, and marked with the name and number of the crib.

ST. CLAIR RIVER.—The wreck of the crib at the head of Russell Island will be marked by placing over it, as near as possible, a barrel buoy painted half red and half white and marked "St. Clair River Crib No. 12."

Similar buoys were established in August, 1900, and referred to in Light-House Board Bulletin No. 112, of Sept. 1, 1900, paragraphs 76 and 77.

By order of the Light-House Board:

J. C. WILSON, Commander, U. S. Navy,  
Inspector 11th Light-House District.

## SUMMARY OF ICE CONDITIONS.

The Weather Bureau report indicates that the ice fields are disappearing over western Superior, while over east portion the fields are about the same size but are slowly wasting away. The ice in the St. Mary's river is decreasing steadily, and a passage can be forced by the latter part of the week; the "locks" will be ready by Thursday. In Green Bay the ice is melting rapidly and the ferry Ann Arbor forced a passage to Menominee on the 15th. The Straits are full of ice, but it is broken up and probably little trouble would be experienced in forcing a passage; the steamer Pentland passed the straits at 8:40 a. m. Sunday, April 14; the ice field at the foot of Lake Huron has decreased in size during the week and the bridge has been broken, and much ice has run down the river, the field extends up to about Lexington, and with strong southerly winds will probably move out. There is very little ice reported in Lake Erie, the large field at the east end has moved out and is breaking up so that but little obstruction would be offered to vessels. There is very little ice in Ontario and navigation is practically open on that lake.

In comparison with same period last year there is a wider belt at Duluth, and the conditions are about the same over the eastern portion and St. Mary's river. The conditions at the Straits are about the same, with probably somewhat less ice in southern Lake Huron, but the field is more compact. There is much less ice in Erie and Ontario. The display of storm warnings has been resumed on Lakes Michigan and

Huron, will be resumed on the 20th on Erie and Ontario, and on Superior with the opening of the locks at Sault St. Marie. It is anticipated that general navigation will be resumed on or about April 20.

## INSPECTOR OF HULLS, STEAMBOAT INSPECTION SERVICE.

The United States Civil Service Commission announces that on May 7-8, 1901, an examination will be held in any city in the United States where postal free delivery has been established, for the position of inspector of hulls in the Steamboat-Inspection Service.

Information relative to the subject and scope of the examination may be found in sections 157-159 of the Manual of Examinations revised to January 1, 1901.

Age limit 25 to 55 years.

From the eligibles resulting from this examination it is expected that certification will be made to the position of inspector of hulls in the Steamboat-Inspection Service at Detroit, Michigan, at a salary of \$1,800 per annum, and to other similar vacancies as they may occur.

This examination is open to all citizens of the United States who comply with the requirements and desire to enter the service. All such persons are invited to apply, and applicants will be examined, graded, and certified with entire impartiality and wholly without regard to any consideration save their ability as shown by the grade attained in the examination. Attention is invited to the fact, however, that in making certification preference will be given to eligibles who are legal residents of the Steamboat-Inspection District in which the vacancy exists, and in the absence of such eligibles certification will be made of eligibles who have licenses for waters of the district in which the vacancy exists, regardless of the local legal residence of the eligibles.

Persons who desire to compete should at once apply to the United States Civil Service Commission, Washington, D. C., for application form 1087, which should be properly executed and promptly filed with the Commission.

THE United States revenue cutter Morrill is fitted up at Milwaukee, ready for service and has her full complement of crew—35 men. The officers are: Captain, A. B. Davis; 1st lieutenant, L. Ainsworth; 2d lieutenant, P. J. Haake; 3d lieutenant, W. E. Hall; chief engineer, F. E. Owen. The Morrill expects to go out next week and to go up the "Soo" river on patrol work. Lieut. Haake is back from New York, where he has been on the Gresham, which he accompanied from the lakes when she was taken to the seaboard at the outbreak of the Cuban war. Lieut. Hall is expected to arrive from Baltimore in a few days.



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LA SALLE & CO., Board of Trade Building, Duluth, Minn.

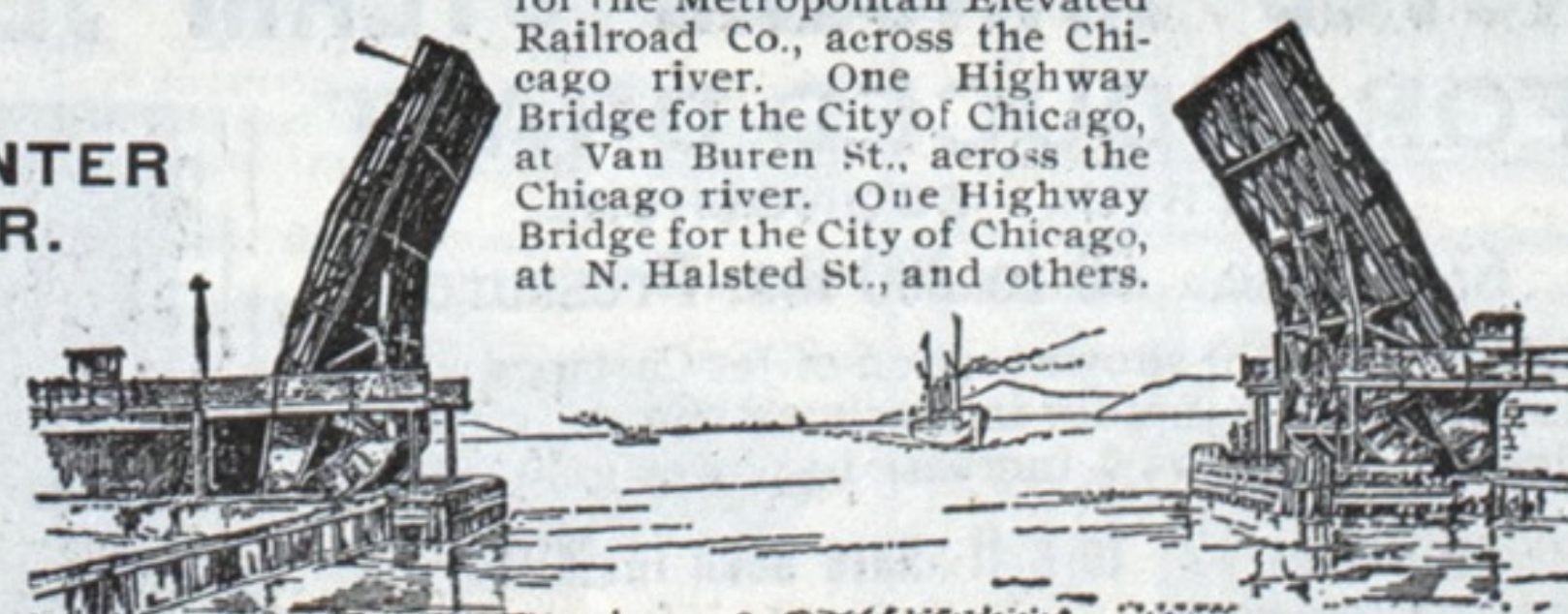
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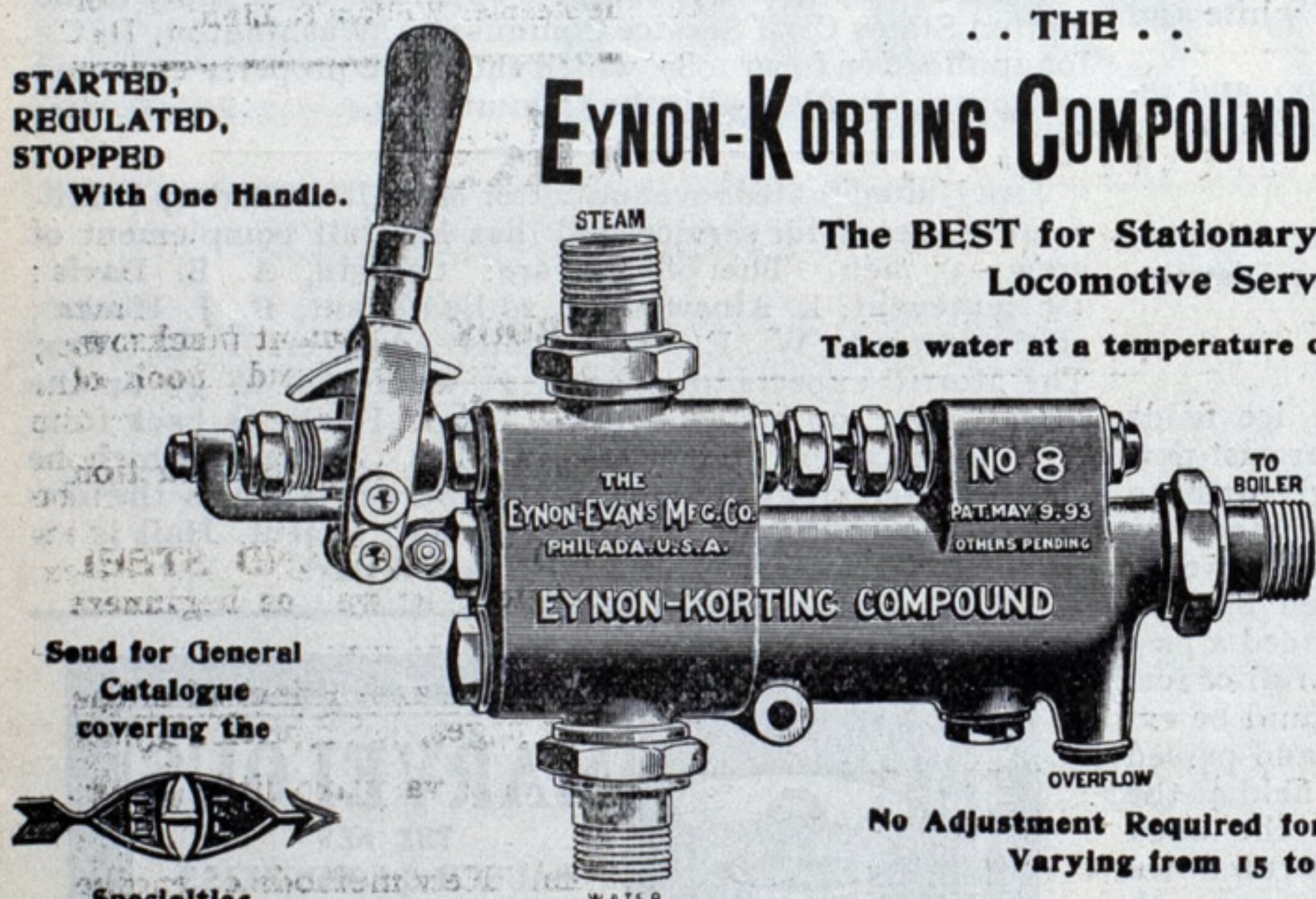
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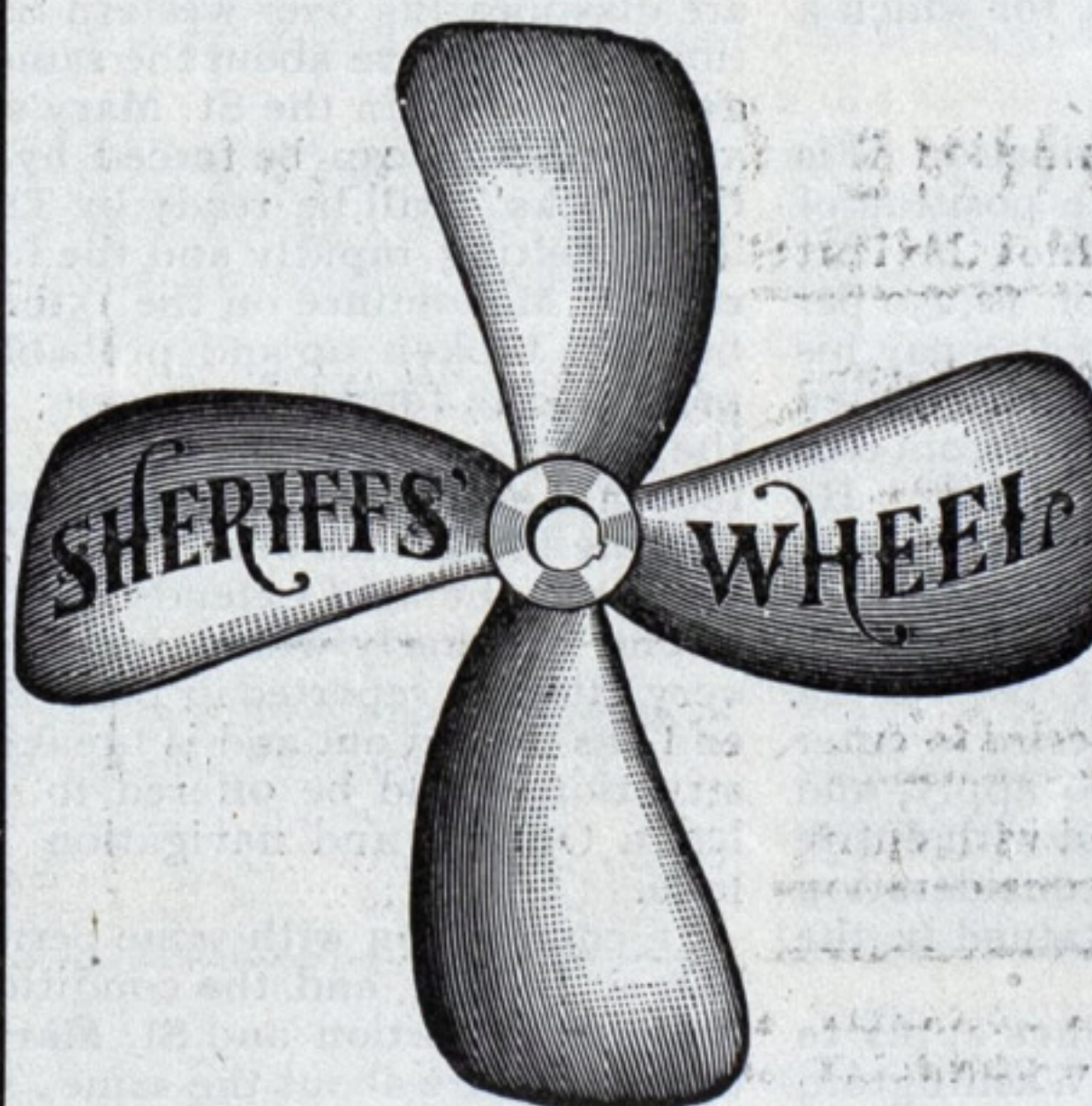
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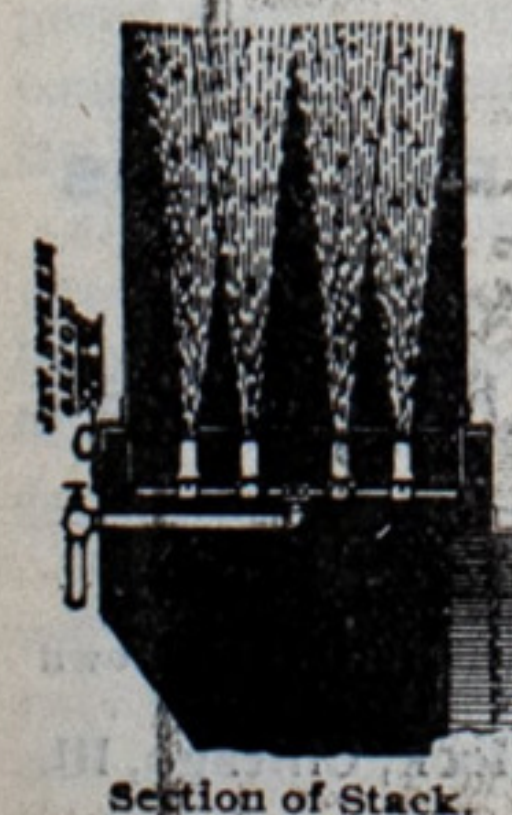
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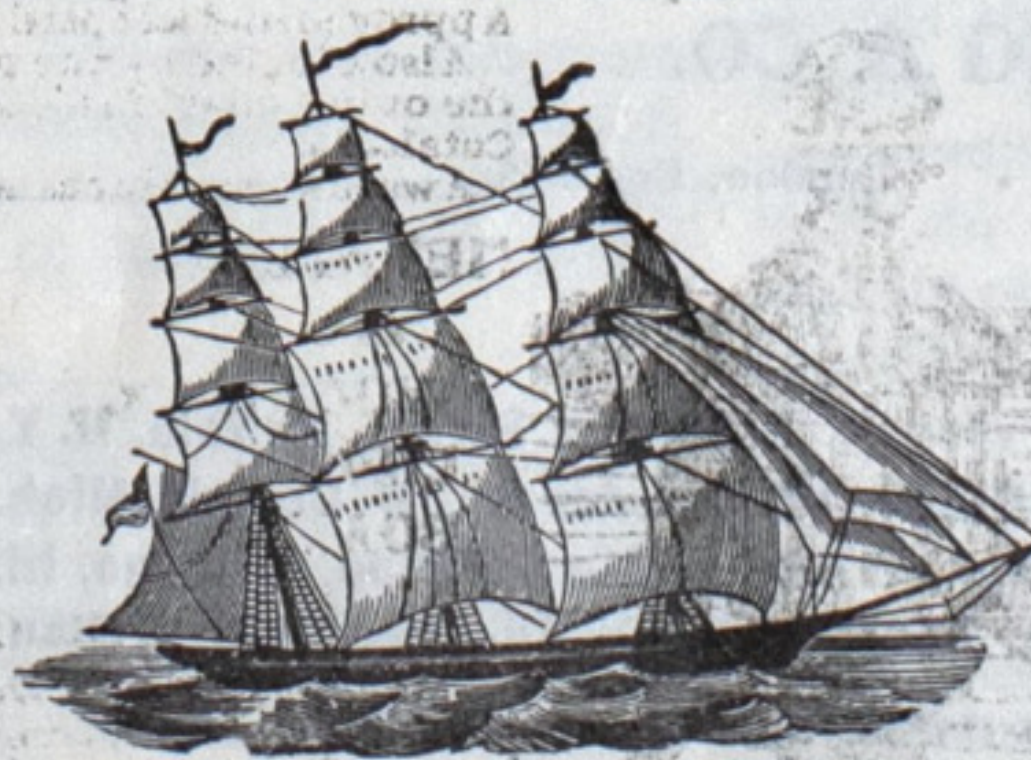
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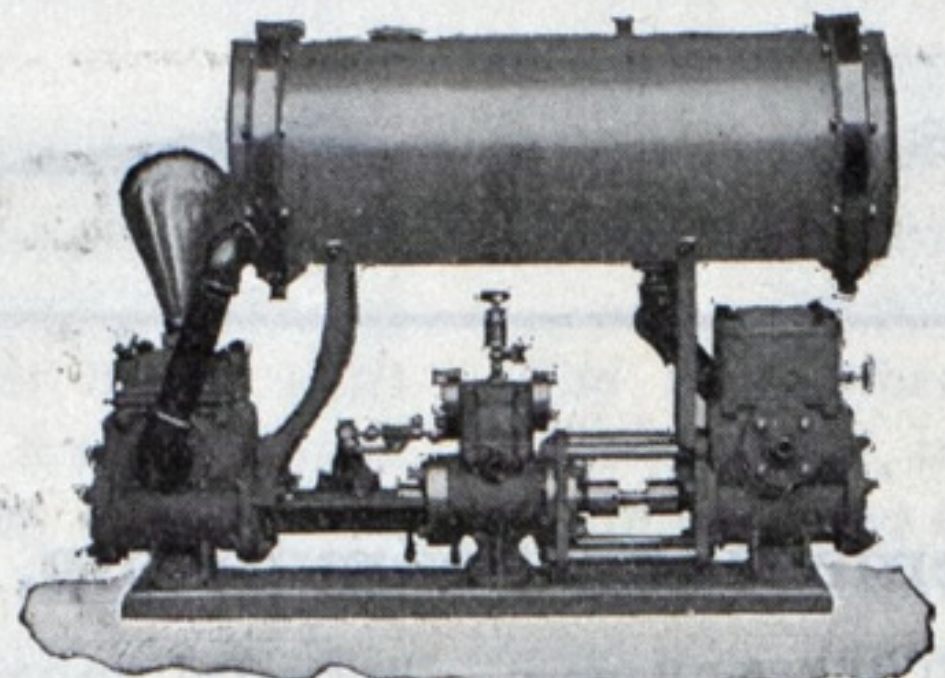
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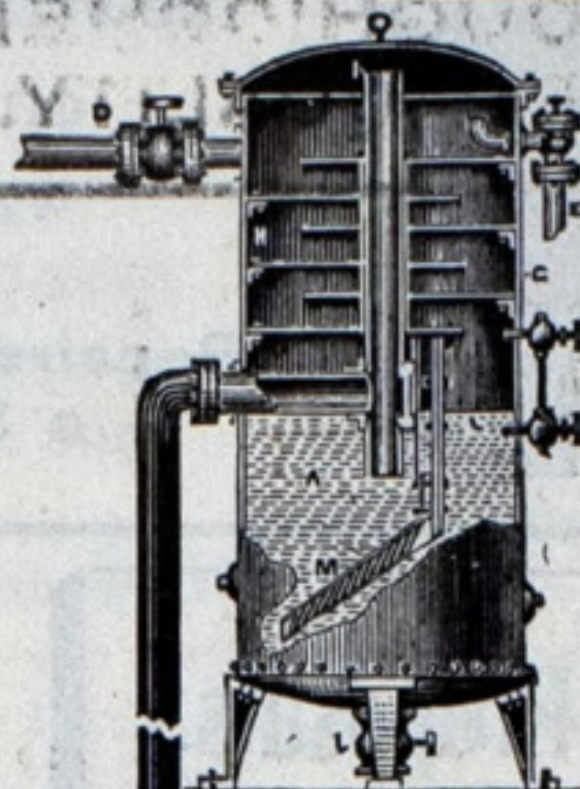
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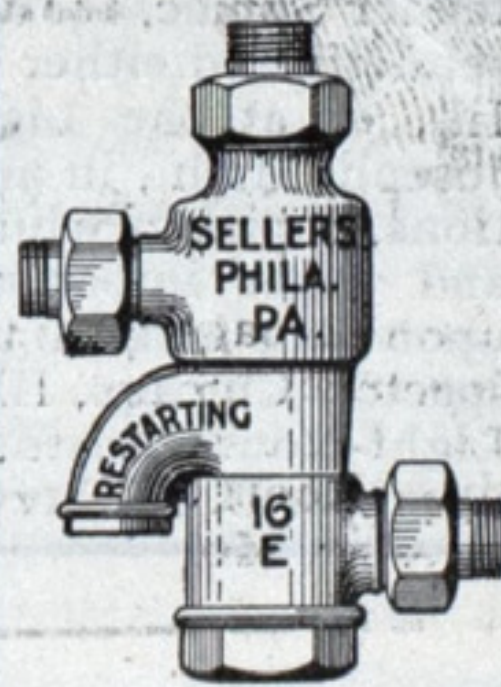


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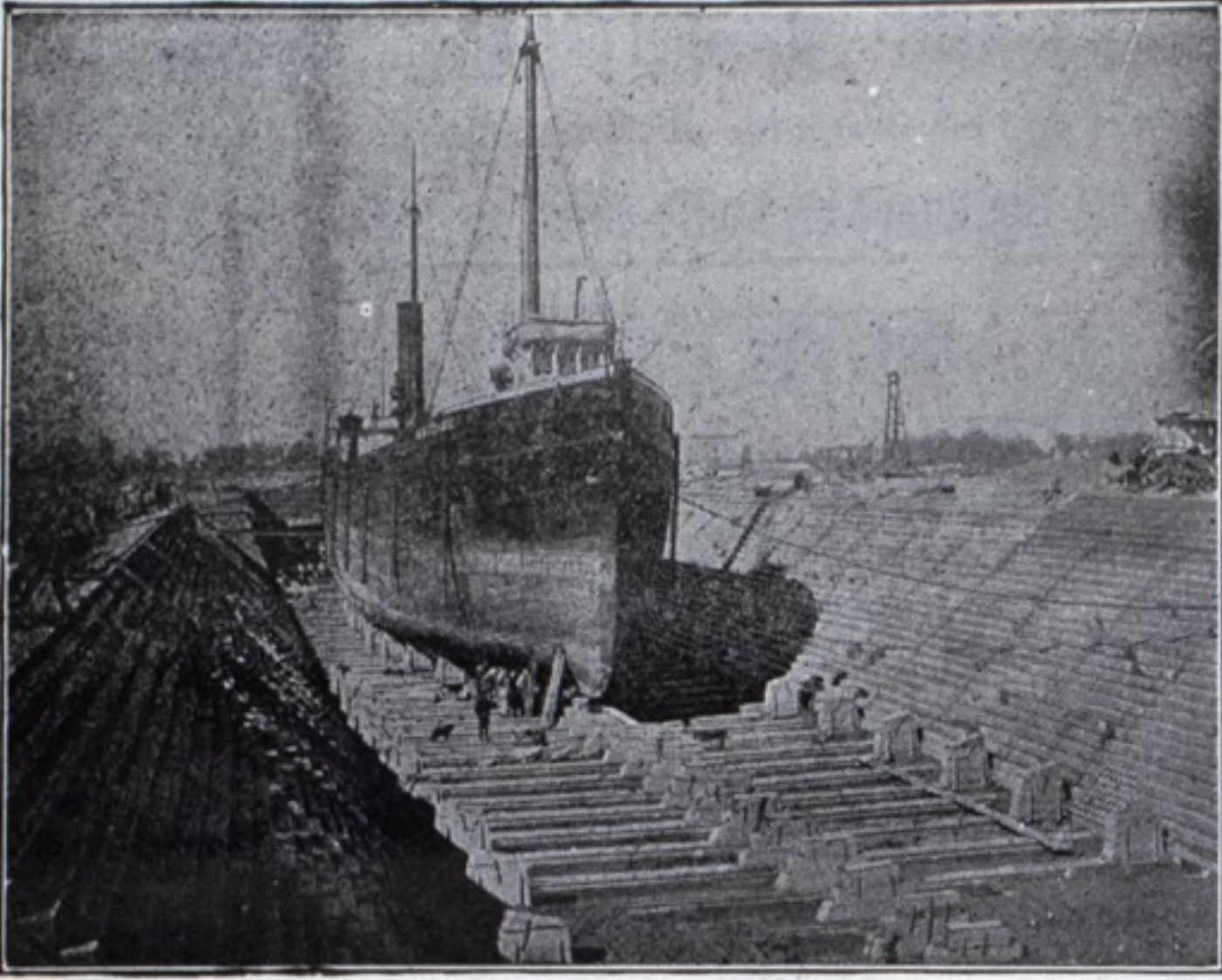
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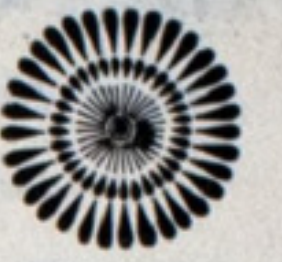
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## Government Proposals.

U. S. ENGINEER OFFICE, 57 Park St., Grand Rapids, Mich., April 10, 1901. Sealed proposals for dredging at Harbors on east shore of Lake Michigan will be received here until 3 p. m., April 25, 1901, and then publicly opened. Information furnished on application. CHESTER HARDING, Capt., Engrs. 15-16

U. S. ENGINEER OFFICE, Duluth, Minn., April 5, 1901. Sealed proposals will be received here until noon, April 20, 1901, and then publicly opened, for furnishing and placing riprap at Duluth ship canal. Information on application. D. D. GAILLARD, Capt. Engrs. 15-16

SEALED PROPOSALS will be received at the office of the Light-House Engineer, Buffalo, N. Y., until 12 o'clock M., April 22, 1901, and then opened, for rebuilding the keepers' dwelling at Port Clinton, O., in accordance with specifications, copies of which, with blank proposals and other information, may be had upon application to Major T. W. SYMONS, Corps of Engineers, U. S. A. 13-14

U. S. ENGINEER OFFICE, Custom House, Cincinnati, O., April 9, 1901. Sealed proposals for one 30-foot length, flat-bottomed, steel-hulled, stern-wheeled steam launch complete, will be received here until 2 p. m., May 14, 1901, and then publicly opened. Information furnished on application. WM. H. BIXBY, Major, Engrs. 16-19

SEALED PROPOSALS will be received at the office of the Light-House Board, Treasury Department, Washington, D. C., until 2 o'clock p. m., April 30, 1901, and then opened, for furnishing the materials and labor of all kinds necessary for the construction and delivery of the light-house tender Sumac, for a fixed sum for said vessel delivered either in the harbor of Chicago, Ill., or at the Light-House Depot at St. Joseph, Mich., in accordance with specifications, copies of which, with blank proposals and other information, may be obtained upon application to the Light-House Inspector, Chicago, Ill., or at the office of the Light-House Board, F. J. HIGGINSON, Rear Admiral, U. S. Navy, Chairman. 14-15

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THE MARINE RECORD,  
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